

Strategic Command

EUROPEAN THEATER



STRATEGY GUIDE

Revised Edition, June 2003

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I. INTRODUCTION

Hubert Cater's *Strategic Command - European Theater* is World War Two (WWII) Grand Strategy at its best. As the supreme commander of either the Axis or Allied forces, players can shape the fates of the nations at war during the Second World War in Europe. Ever since its initial release, players have been able to try many different approaches and entertain just as many possible outcomes. This strategy guide is an attempt to highlight many of the grand strategy options available to players as they seek ultimate glory.

Strategic Command went Gold on July 12, 2002 with the release of the version (v) 1.01 demo. Since then, many upgrades and enhancements have been made to the original game. Most discussion in this guide is generic in nature and based on the current v1.07 changes, which should be the final game patch. Some discussion may not be directly applicable to whatever game you are playing, depending upon scenario, modifications using the Campaign Editor, game options, difficulty settings, and whether you are playing against the computer Artificial Intelligence (AI) or a human opponent. In general, however, the grand strategy options discussed here should provide useful guidance for most players.

Comments and ideas discussed in this guide have been extracted from the *Strategic Command* forums at Battlefront.com and available documentation (such as the User Manual, the User Manual updates and errata file, and the Version Changes file), arranged and edited to make some coherent sense for beginner and intermediate players, and presented here to promote a greater appreciation of the depth and complexity of the game. Too many individuals have provided material that has been included in this guide to name them all and provide proper acknowledgment. Credit and special tanks go to everyone on the forum for debating the various strategies and sharing their ideas with the *Strategic Command* community, and most individuals are acknowledged in the Credits section at the end.

Numerous references about the Second World War in Europe are readily available. New players who may not be familiar with WWII history or grand strategy may want to read a couple of excellent books by B. H. Liddell Hart - *History of the Second World War* and *Strategy*. Also, *The Second World War* by John Keegan offers an excellent overview of the action, politics, and major themes of the war. There are many more fine books, and players interested in the historical outcomes of the various campaigns are encouraged to seek them out. Knowing what broad sweeping decisions actually occurred in the war and why they were made will help players make their own decisions during a game. This guide provides some historical insights, but the game itself does not impose historical patterns. Players are relatively free to stray from a historical course; however, those unwilling to adhere to sound strategies may find the game difficult to win. WWII history and grand strategy should be kept in mind as you play *Strategic Command*.

II. AXIS STRATEGY

General

Since the Axis side will pretty much be at an economic disadvantage for most of the war, aggressive game play, active research and development, the plundering of resources, and use of surface raiders may be the only path to victory.

In Germany's first two front situation of the war, *Fall Weiss* (Case White, the German invasion of Poland on September 1, 1939), the United Kingdom (UK) and France are positioned in the west while Poland occupies the eastern interest of Germany's war machine. Quick victory over the Poles is essential and will ensure that the Western Allies do not have enough time to mount an offensive on your western border. Sufficient build-up towards France will then be required and/or perhaps a quick series of battles over Denmark, Norway and the Low Countries to add to the military production point (MPP) coffers. At this point *Fall Gelb* (Case Yellow, the German invasion of Low Countries and France on May 10, 1940) should be performed to at least eliminate the French army on the European mainland and open up the rest of Europe to potential Axis domination. An invasion of England could be attempted, or perhaps more attacks on smaller countries could be mounted as you prepare for the Russian bear.

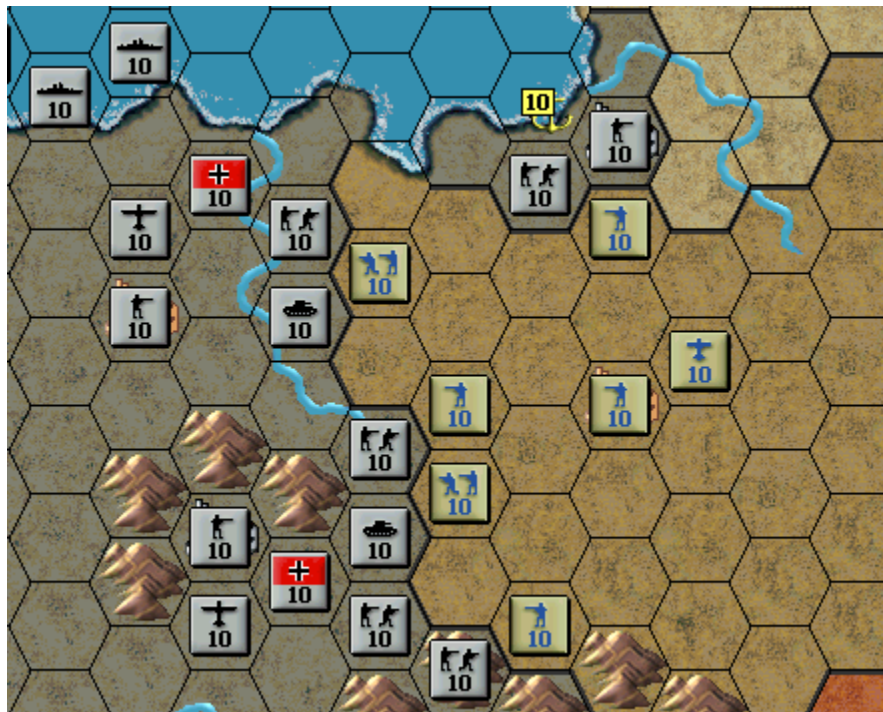
Keep an eye on the United States of America (USA) and the Union of Soviet Socialist Republics (USSR) join percentages in the War Map, and when playing safe try to avoid declaring war on countries that were traditionally neutral or at least within the Soviet sphere of influence in order to keep the Soviet's interest low. By May 1941, initial preparations should be in place for *Barbarossa* (the Axis invasion of Russia on June 22, 1941) and the conquest of the USSR. Encirclements, successive victories and rapid drives to Moscow, Leningrad and Stalingrad will be vital before the Soviets are able to regroup and reorganize their defense forces. Scorched earth, supply problems, partisans, the transfer of Soviet troops from Siberia, and the eventual entry of the USA armed forces will make a quick victory all the more difficult but not impossible.

Opening Moves

Quick victory over the Poles is important so that Germany's eastern flank is secured and attention can be shifted west. Poland has to surrender within four turns or Russian readiness begins to increase. Starting on the fifth turn, Russian readiness increases 2% each turn up to about 8% per turn. This increased Soviet war readiness was added to balance out a German tactic of destroying Polish units but not taking Warsaw. Delaying the conquest of Poland has negative consequences. Delay permits an earlier Soviet annexation of the Baltic States and slightly increases the initial Soviet starting MPP's.

There are several different strategies for defeating Poland, but only the basics will be covered here. Keep all your units supported and do not break the connection of your units, otherwise your readiness the following turn may be affected by encircling Poles attempting to cut your supply and delay the defeat of Poland. Concentrate the first turn on destroying the two Polish Armies

and the Corps that links them, and slapping the other two Corps around a little. On the second turn, destroy the other two Corps and knock down the Warsaw garrison.



1939 Fall Weiss Scenario, September 3, 1939

The idea is to slowly move your force like a sweeper over Poland, systematically destroying units, and ultimately marching into Warsaw. Poland will usually fall in two to four turns as long as you keep your armies supplied and concentrate on destroying units. Be aware that the Polish air force may try to hide in the far northeast of Poland and the southern units may move into the mountains in order to hold out longer. Not only must you occupy Warsaw, but also the Polish forces must all be significantly defeated before Poland surrenders and you can receive its plunder. Remember, how quickly you defeat Poland is not as important as minimizing casualties and gaining valuable experience that your units will need later.

After Poland has surrendered, Germany has to leave at least one unit in one of the two border cities, usually Warsaw, to keep USSR war readiness low. When your minor allies (Romania, Hungary, and Bulgaria) start joining later you will need more. Beginning in November 1940, you will need more depending on how many Axis minor allies have joined. If you do not have enough units or you have too many, USSR war readiness increases by about 3-6% per turn. This will be explained in greater detail later as part of the *Barbarossa* discussion. Keep this in mind, but for the time being ensure that one or both of your two border cities has a garrison. Now it's time to be looking west.

While the Polish campaign is still ongoing, preparations should be made for operations in the west. The Low Countries deserves immediate consideration. The Allies may be attempting the "Dutch Gambit" (a pre-emptive Allied invasion of Low Countries) to gain plunder and establish a defensive line along the Rhine River. You may be considering an early Blitzkrieg of your own to strike the Allies while they are still mobilizing. Denmark and/or Norway could also be

considered as stepping-stones along the way to gain plunder and experience before the dealing with the Allies, or saved for later as quick victories after France is secured.

Assuming the Allies have not attacked, stay defensive and perhaps buy a Corps to hold your line in the west. After the initial attack in Poland on the first turn, start relocating the Rundstedt Headquarters (HQ), the southern Air Fleet (Luftflotte), and either an Army or Tank Group up to the Danish border. Denmark can be blitzed as early as the third turn with a combined air, ground and naval campaign, but it's very important that you have the leadership of the Rundstedt HQ in place to support the operation. Having a Corps loaded on transports ready to occupy Copenhagen can secure Denmark in a single turn. Otherwise Denmark will easily surrender on the following turn when you march into the vacant capital. Alternatively, players can take their time. Save MPP's by moving units to Denmark normally rather than paying the extra costs for operational (op) movement, and build up some experience for your fleets by repeated shore bombardments on Copenhagen.

While Denmark is being attacked, a second strike force consisting of two Armies and a Corps can be loaded onto transports in Poland and moved to Norway. At least one or two Luftflottes should be moved to northern Denmark to be within range of Oslo and to provide air cover for your seaborne invasion. Your Sub (U-boat) should also be providing cover for the invasion. A technique for taking Norway is to strike with two Armies or Corps on either side of Oslo and a Corps behind. Since Oslo is not entrenched and your landing units have a surprise bonus, isolate and assault it with one or two ground attacks first and then hit it with an air strike or two. Move the remaining units up and strike again, taking control of the port after the Oslo garrison is destroyed. Then you can directly transport another Corps into the capital and Norway surrenders.

Norway should surrender on the first turn. Unless the UK has a unit waiting off the coast adjacent to Bergen and ready to move in, you can usually op move a unit into Bergen the following turn, completing the conquest of Norway and securing your northern flank. Be sure to garrison both Bergen and Oslo. A Luftflotte to interdict bomber attacks and perhaps an HQ for support could be considered later (after France) for the long-term garrison. If you fail to take Oslo in one turn or the British occupy Bergen, then be prepared for a longer campaign while you move an HQ and other units up for support. This is a risk players must consider, so landing an HQ during the initial assault is worth planning for. On the other hand, if you do it right then it is possible to conquer Poland, Denmark, AND Norway within the first four or five turns and be ready to face the Allies with the additional plunder and experience you've gained along the way.

Assuming the Allies attack the Low Countries or you plan an early attack yourself, then be prepared to attack the Low Countries by the third turn with at least a Tank Group, an Army, a couple of Corps, two to three Luftflottes, and HQ support. If the Allies have performed the "Dutch Gambit," attack Brussels and the Maginot line simultaneously and Italian readiness increases by about 10 % per turn, so that they will join in one or two turns. Together with the Italians it should be no problem to reach Paris. If the Allies have defeated the Low Countries on the second turn, Germany should attack the hex southeast of Brussels with Luftflottes, then an Army or Tank Group, and then occupy the hex with a Corps. If the Axis gets that hex, then they have a bridgehead across the Rhine River and do not need to attack at penalty. (Remember, the attacker is reduced to 50% offensive power when attacking from a river hex.)

When that first hex has fallen, attack the forest hex below it in the same way before the enemy has time to entrench.

The technique to use here is to simply concentrate your attacks on one unit and destroy it. You usually can attack with two or three ground units from a river (which is not very good, but reduces enemy entrenchment to zero) and then use your Luftflottes to kill the enemy. If the Gambit happens, then you will need additional air units, not an additional HQ, to break the Allied defenses. Occupy the vacant hexes with an inexpensive Corps (in case they destroy it, so next turn you can do the same with the next enemy unit). The overall idea is that your starting position improves each turn. The enemy reserves are destroyed faster than they can be replaced, and you continue to advance slowly towards Paris.

Many players do not concern themselves with the Gambit. If the Allies do try it, then hit them hard as discussed above. Isolate them in Brussels using the Manstein plan (i.e., the *Fall Gelb* strategy for attacking through the Ardennes forest and racing for the English Channel coast.) Alternatively, some players simply declare war on the Low Countries on the first or second turn, at least maneuver units into blocking positions, and then take Brussels on the third or fourth turn - thus pre-empting a possible Allied pre-emptive attack!

If you stay focused, the Allies will lose more than they gain if they fight aggressively and France will fall regardless by summer 1940, if not sooner. The Gambit has its advantages and disadvantages, but the important thing is for the Axis to win the battles and build up unit and HQ experience for later. The Gambit only pays off for the Allies if they can crush Germany in France (and this is simply unlikely unless you make too many mistakes). Otherwise it is deadly for the Allies in the long run. They lose so many MPP's for delayed USA entry (about -13%), as well as the United Kingdom's MPP's wasted in France and an early entry of Italy into the war. That reduced USA readiness delays America's entry into the war by about four turns, which is bad for the Allies because it means the loss of those 180 MPP's per turn until the USA does enter.

If the Allies haven't taken the Low Countries, use the old Schlieffen plan (i.e., the World War One plan to wheel through the Low Countries) to grab them first, form a good position with air cover, and be in position to invade France. Brussels can usually be defeated with two ground attacks and two air strikes, occupied by a Corps or Tank Group, and an additional Army op moved southwest of the capital during the turn it is captured. Attack the Dutch Corps in the north to gain additional experience for your units. Be careful not to get too daring with your panzer units, getting them too far ahead without flank support or too close to the coast where they are vulnerable to Allied air and shore bombardment. Keep your HQ's close by, and make sure that an HQ supports your Luftflottes.

A brief discussion about options for your starting U-boats in the Atlantic is appropriate. Basically you have three options: run to the northwest and force the Allies to hunt you down; enter the convoy lanes and inflict as much damage as you can; or, attempt to break out into the South Atlantic. Drawing the Allied fleet farthest away toward the northwest Atlantic has the advantage of delaying their use elsewhere, such as harassment of a potential invasion of Norway. Inflicting MPP damage on the UK during the opening moves delays construction of units likely to be used against you in the coming battle

for France. Breaking out to the south has the advantage that maybe one or both subs may survive long enough to reach port later in occupied France.

The Allies are likely to hunt you down and destroy your U-boats anyway, so making a run for the South Atlantic is probably best. If and when your subs are discovered, you may as well counter-attack to inflict as much damage as possible because once your subs are spotted it's virtually impossible to evade the Allied fleets. Hopefully, a British capital ship will meet its fate and give the UK an early setback. You can then attempt to escape with any U-boat survivors if the Allied fleets choose to withdraw.

France

Let's start with some of the key elements to an Axis victory as found in this game: quick victory over France; key research in Industrial Technology and Jet Aircraft; and, bold and aggressive strategy. The main reason to start with France is simply due to the economics. The earlier you knock France out, the sooner you receive her resources and plunder (and a big one at that), and the sooner you can start that all important tech investment strategy. This is key since the Axis needs all the advantage they can get early on in order to win. They need experienced units, the right amount of units, the right return from tech investment, and a bold and aggressive strategy if they want to have a chance at winning. Otherwise, if any of these things don't happen the Axis will have a very hard time once the combined incomes of the UK, USSR and USA come into play.

Assuming Germany has at least conquered Poland, Denmark and the Low Countries, their builds by now should include a fourth Luftflotte, a third HQ, a third Tank Group, and one or two additional Armies. Depending on time and money, additional air units should be a priority, either another Air Fleet or perhaps a Strategic Bomber to start reducing Paris or strike at Allied fleets. You want to have enough depth in your force structure to steadily advance through whatever the Allies have built up in France. Quick victory is important, but that does not mean rushing in before you are ready and risking the loss of expensive units. If necessary, pause and regroup after taking the Low Countries, replace losses, move your Luftflottes forward, and then proceed with a deliberate attack toward Paris. Destroy Allied units one by one while protecting yourself from unit losses. Losing an expensive Tank Group or Luftflotte is painful. Take your time and grind down the Allies in France, even if it takes a couple extra turns.

Begin by hitting any British units that do not have HQ support and any French units that are not in the Ardennes forest. If the British move Carriers within range to intercept then hit them and try to sink them even if it costs you a German air unit. Be careful to watch which units intercept and remember which will be weakest from losses. Keep striking at least one French Army each turn until his line breaks and then exploit with your armor (panzers). If there is a French HQ in range, then use air strikes to kill it. Keep a Corps in the south ready to block any French effort to advance into Germany. It will take a bit longer to conduct a deliberate attack in France, but you will lose a lot less this way. France will eventually fall, even if Britain commits to its defense. That would only weaken Britain in the long run for *Sealion* (the German seaborne invasion of England, planned but not executed) or for your future expansion into the Mediterranean Theater (Med). Remember to keep German HQ's close to frontline units and keep your focus on Paris.

The Maginot Line fortresses should generally be avoided unless the French Armies have recently been replaced with Corps and have not had time to entrench. Attacking entrenched units in fortress hexes from the Rhine River is not productive: you take unnecessary losses and actually lose valuable experience. Watch your left flank for counter-attacks coming from the Maginot. If the French take enough losses to make a quick attack worthwhile, then consider doing that. France surrenders once Paris is captured regardless of available French forces remaining. So don't waste effort on the Maginot Line garrisons.



1940 Fall Gelb Scenario, May 10, 1940

If the Allied defense of the Low Countries and France is exceptionally tough and the Maginot Line prevents a flanking maneuver, another strategic option could be considered - Italy. The Italian contribution to the Battle of France is generally too little, too late, and usually limited to attacking Marseilles to gain some experience. However, if the Allies have moved their Mediterranean garrisons and activated Italy too soon, it opens the backdoor of France for a German blitz from the south. Moving a HQ and a couple of units to Italy once it declares war could provide the flanking maneuver necessary to break the French line. Once the French line breaks and Paris is under final assault, remember to continue attacks against any remaining units as training opportunities to squeeze out those last few experience points available.

Once France surrenders, the battle is not necessarily over. Britain may be occupying the French coastal cities to deny you those resources for another turn or two. Be prepared to continue the fight. If air units are within range, hit the ports first to prevent escape and then destroy the units later. It will cost Britain more to rebuild a lost unit than to reinforce even a one-factor remnant that manages to get away. And while Germany has air superiority in France, now is the time to consider moving your Baltic Sea U-boat and perhaps a fleet through the English Channel and into the Atlantic, if you plan to do this at all. Very soon, you'll need those Luftflottes to support your operations elsewhere.

Once France is secured, the Axis will have to decide what the focus of their grand strategy is: *Sealion* to defeat the UK, *Barbarossa* to defeat the USSR, or expansion into the Mediterranean to cripple the UK and perhaps to strike USSR from the south. Unless England is invaded and the UK defeated, consideration will have to be given to adequate garrison forces in the west. Until the USA enters the war, Germany can generally get by with at least Corps garrisons in Brussels, Paris, and Brest. An experienced Army left in Paris and a Corps in Bordeaux could also be considered, leaving in place a robust French garrison that can be fully entrenched and ready for an Allied invasion. Any unit placed in Brest is likely to be subjected to multiple Allied bombardments requiring repeated reinforcement, so a Corps here is an economical choice. Having an intercepting Luftflotte and supporting HQ in western France also helps. In the long run, it's probably not a good idea to hand over air superiority to the British and allow them to gain experience with minimal losses. So plan to keep a Luftflotte or two and an HQ in France to keep pressure on Britain if possible. These forces would then be available as a strategic reserve if necessary.

United Kingdom

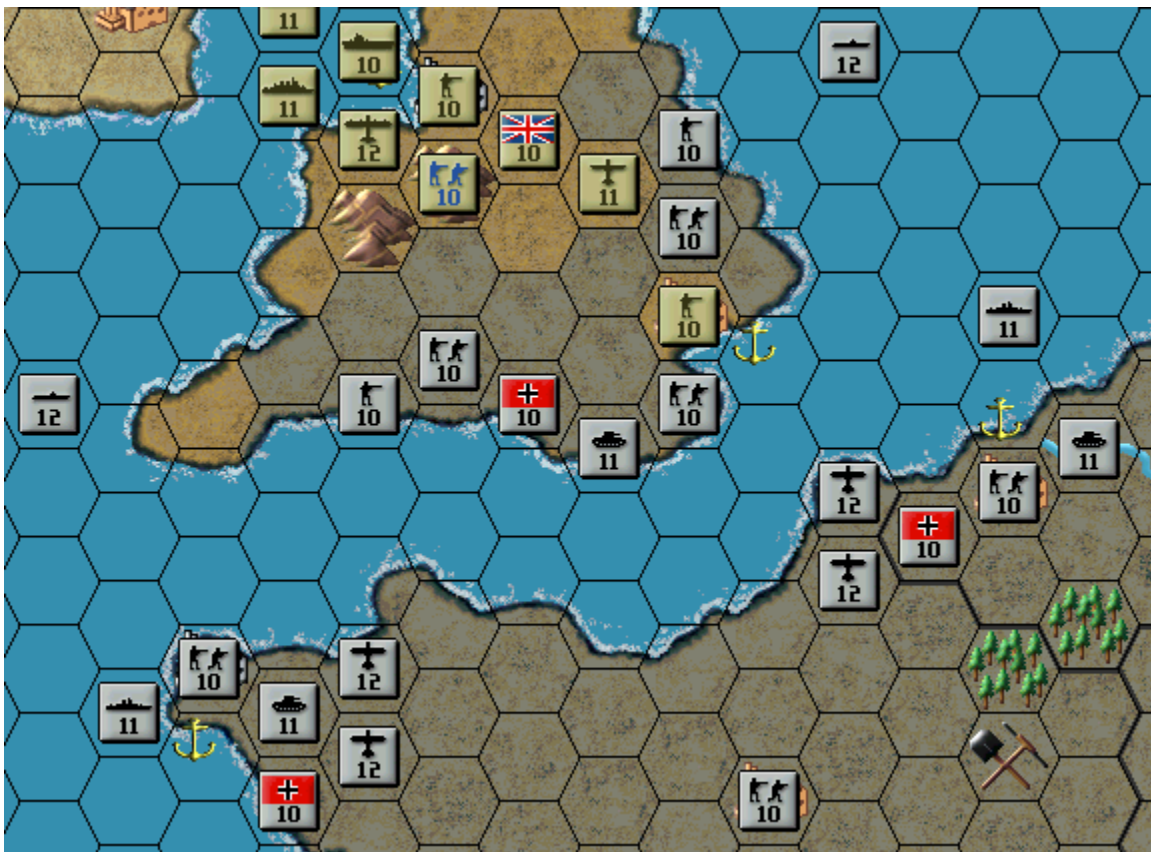
Sealion

The Axis decision following the surrender of France to invade England or not invade is one of the toughest a player has to make. *Sealion* is not something to try. Either the conditions are right for a successful invasion resulting in UK surrender, or they are not. If London and its port are not captured early, Axis forces are stuck in England and will struggle with supply problems to defend against British counter-attacks. A prolonged battle in England after an Axis *Sealion* attempt will also increase USSR and USA war readiness, ensuring early entry of these Allies and, most likely, early defeat of the Axis. But if an invasion is successful and the UK surrenders, then the Axis will have secured their western flank as well as their Mediterranean flank - Gibraltar, Malta, and Egypt. Axis conquest of the USSR and USA, and ultimate glory, would then be only a matter of time.

So what are the "right" conditions for *Sealion*? Timing is one factor. Several turns are necessary to prepare and stage forces, transport units into assault positions, and then several more turns to actually fight and defeat the UK. Therefore, *Sealion* should be ready to go by fall 1940 or you risk early entry by USSR in 1941 and a two-front war before you're ready for one. The condition of both Axis and British forces following the Battle for France is another factor. If German losses were heavy and British losses relatively light, then invasion may not be a good option. This assessment also has to consider the location and strength of the British Royal Navy and Royal Air Force (RAF), which would be defending against an invasion. It's difficult to define optimum conditions, but a late invasion against a strong British defense is probably a gamble at best.

This is not to say that the "right" conditions can't be created. The Axis has a couple of strategic advantages: interior lines and Fog of War (FOW). The Axis can rapidly shift their forces around the continent to strike north into Scandinavia, south into the Balkans, southwest into Spain, or push into Egypt from Libya. Or, they can prepare for a possible *Sealion* all while they are "maybe" doing something else. With FOW, the British don't know for sure and a prudent Allied

player is probably worrying about reinforcing his Mediterranean possessions just in case, or maybe even trying to prepare for a surprise offensive himself somewhere. FOW works both ways. Use of Axis air units during this time to spot British activity in and around England, and also any movements in the central Med, may provide some clues. If it appears that the UK is shifting forces out of England and leaving behind a light defense, then a successful invasion might just be possible. What could possibly cause this to happen? If Axis units are allowed to be observed leaving France and obviously not preparing for an invasion, and some Axis movements are made to threaten UK possessions in the Med, then Allied redeployments could be expected. But instead of leaving France completely, German units could simply be repositioning themselves around the ports of Arcachon in southern France and Kiel in Germany - out of spotting range of RAF aircraft. A couple of confirmed sightings that the UK is relocating forces may be just enough to signal a green light for execution of *Sealion*.



Hypothetical *Sealion* Invasion of England

If tentative plans are made to invade England after France surrenders, some thought should be given to how much is actually invested in research and when. For an invasion to succeed in the near term you'll need additional Luftflottes, Strategic Bombers and U-boats now rather than potential tech level advances a year from now. This is a very tough decision to make, so it may be best to delay spending that French plunder for a few turns while you consider your options and watch for things to happen. For the most part, you would be building most of these additional units anyway over the next year, so building units early and investing in research a little later should not be a problem. On the other hand, a couple of quick tech level advances in Jet Aircraft, Heavy Bomber, Long-Range Aircraft, or Advanced Subs would prove very useful.

As indicated previously, *Sealion* is one of the most difficult decisions to make in this game because it involves so much risk.

Assuming *Sealion* is executed, the Axis player should plan to transport at least three or four Armies, a couple of Corps, a HQ, and perhaps a Tank Group in the first wave. Landings both north and south of London to ensure its early isolation should be considered. Inexpensive Corps units should be positioned on the flanks of the landings, since those may bear the brunt of naval counter-attacks. U-boats should be positioned to protect these flanks, and additional subs and fleets positioned within counter-strike range. Don't hold anything back with the German Kriegsmarine navy - this is "It." Every Axis air unit should be moved into strike range to either blitz London or cover the invasion fleet, ensuring each air unit is also under HQ control. Knowing that the Allied player may view the game reports and note an increase in naval activity, you'll probably only have a turn or two of surprise before he builds additional units or redeploys units back to England.

The ideal goal for initial invasion turn is to isolate London so it can't be reinforced and pound its garrison to about five factors or less. It may even be possible to take London if you have enough air support. Expect to suffer landing losses and maybe not isolate London, but at least ensure your HQ lands to provide some supply for continuing the attack on the following turn. Depending on the naval situation, move a second wave into assault position. Fresh Armies to attack London on the next turn with their 100% readiness bonus would be ideal. The goal for the second turn has to be either the destruction of the London garrison or its definite isolation and expected destruction on the following turn. If this does not look likely because the UK has established a defensive line around London and/or has cut off parts of your invasion force, then you are looking at one of those "prolonged battles" that you really wanted to avoid.

Once London falls, the supply situation immediately improves. Units can be reinforced, an additional HQ can be transported directly into London, and air units flown over to support the next phase of the operation - Manchester. A turn to pause and regroup is probably necessary, and this only adds to the delay. The clock is still ticking for early entry of the USSR and USA, if they haven't already entered by now. (This is where timing is so important. Delaying invasion past late summer of 1940 risks not being able to force UK surrender before USSR entry and a two-front war.) Continue the attack on toward Manchester. Some ground units could start transporting back to the continent while additional air units fly into England. U-boats and fleets can start moving into the Atlantic to intercept returning British units and perhaps early USA arrivals. Keep up the pressure on Britain, destroying units and isolating Manchester. Once Manchester is captured and the UK surrenders, eventual Axis victory in *Strategic Command* is virtually assured. Unless, of course, neither the USA nor USSR has declared war yet – in which case you achieve an early Axis victory!

No *Sealion*

Assuming that conditions are not favorable for launching an invasion of England, other Axis options in the west include: an air campaign against Britain to maintain air superiority and inflict damage to resources; a U-boat campaign to disrupt Allied shipping lanes and inflict MPP losses; and, a campaign to secure Scandinavia. Additionally (and this is somewhat gamey), Axis raids against England and Canada by either German or Italian Corps could be considered, and can be

used to cause considerable distraction. But, if Axis forces land anywhere in Canada then USA readiness increases to 100% and they will join the Allies immediately the next turn, so don't try this too early. Spain will be addressed later as part of the Mediterranean strategy discussion.

An air campaign against the UK is absolutely vital if you hope to have an invasion of England succeed. It can also be useful for inflicting expensive losses that will delay the UK buildup and limit their options. Following the defeat of France, your German Luftflottes and HQ's are experienced and should have an advantage over the RAF air units. Depending on research advances, you may also have a tech level advantage. Ensure all of your air units are reinforced, supported by an HQ, and within range to provide mutual support to each other with escort/interception missions. If you're lucky, you may be able to draw a British Air Fleet into battle with one of yours and then destroy it with two or three others in a single turn. Naval units and HQ's within air strike range are also prime targets. The goal is to inflict more losses on the enemy than you sustain while attacking. Buying a Strategic Bomber to strike at London, Manchester, or their ports is also an option, but is generally not cost-effective for an air campaign alone. Overall, an air campaign against Britain may hurt them and delay their buildup, but will also take its toll on your Luftwaffe and the valuable experience they have accumulated. This is a risk the Axis player must consider.

A U-boat campaign should be considered, especially if any of your starting subs survived the opening moves or the UK's Royal Navy has been weakened. On top of their regular naval capabilities, Axis subs can be used as surface raiders in either the North Atlantic or Mediterranean and receive +0.1 experience for each successful raid on Allied shipping. In the North Atlantic Axis subs must be in range of either St. John's (seven hexes) or Liverpool (five hexes), and in the Mediterranean within range of Gibraltar, Malta and/or Alexandria (four hexes each). Resulting Allied MPP losses in each area will be determined by a random value based on sub strength and their supply levels as well as potential MPP income from these resources. In general, losses up to 40 MPP's in the Atlantic and up to 15 MPP's in the Med can be inflicted each turn, depending on the numbers of subs involved. The only restriction to surface raiders is that they must not be presently engaged with other Allied naval units.

Over time, several (three to five) U-boat wolf packs working together in the Atlantic using hit and run tactics and gaining experience over several patrols could be very effective. The Allied MPP losses will have an effect. If your U-boats can achieve surprise and destroy a couple of British Cruisers or Battleships, then it's possible to gain an advantage in the Atlantic that could be exploited. Additionally, advanced U-boats are wonderfully effective against transports.

However, U-boats are relatively expensive and they have some significant limitations in the game. They are vulnerable to spotting and attack by Allied Carriers (three hexes), Air Fleets (four hexes), and Strategic Bombers (five hexes), and these ranges increase as the Allies achieve advances in Long-Range Aircraft technology. Piecemeal employment of individual U-boats is generally not cost effective. Unless you are willing to employ wolf pack tactics and gain an early advantage, a limited U-boat campaign will only go so far.

Denmark, Norway, and Sweden should be considered in the overall strategy for the UK because the British may take an active interest in Scandinavia, either to obtain their valuable resources for themselves and to deny them to the Axis. If Germany did not conquer Denmark earlier as a

stepping-stone on the road to France, then it should be quickly secured following France's surrender to provide a base of operations for Norway and/or Sweden. Taking Norway after France can be accomplished as discussed previously, but interference by the British navy should be expected. A British transport waiting off the coast to occupy Bergen would permit additional landings and establishment of a strong British presence in Norway. Additionally, the UK's Strategic Bomber with long-range spotting could observe your landing forces and support naval interceptions in the North Sea. If the Royal Navy is active in the North Sea, put an HQ and whatever you can in the way of Luftflottes in northern Denmark - three Luftflottes in the northernmost hex triangle of the Danish peninsula serve nicely. Building a U-boat or two in occupied France and sending them into the Atlantic to draw off the Royal Navy before you launch an invasion of Norway is a strategy to consider here.

Those valuable resources in Norway and Sweden include three cities, three ports, and three mines, so an ambitious Axis player should consider both countries. Conquering both Norway and Sweden actually increases the individual productivity of each and is considered a must for the Axis. Once Sweden has been conquered, plus having a virtual land connection to the continent via Denmark, the supply level of the Scandinavian resources increases from five to eight. Therefore, your production from Sweden and Norway becomes $14 \times 8 = 112$ MPP's per turn, and this will pay big dividends in the years to come. Achieving this early is almost a decisive factor in winning the game.

Norway is generally easier to conquer first, since it can usually be taken in one turn. From Oslo, a direct ground assault to Stockholm will take about three turns. One or two air strikes and a Corps attack can destroy the Swedish air force on the first turn while other units advance. Continued attacks and coastal landings on the second turn can usually destroy the Swedish field army and begin the assault on Stockholm. Air strikes, shore bombardments, and ground assault on the capital should complete the conquest of Sweden on the third turn.

Conquering Sweden first and then Norway is a bit more difficult. While a Corps can be landed in north of Stockholm to secure the mines early, the main invasion would take place in the south consisting of three or four ground units, an HQ, and one or two Luftflottes flown over after the initial landings. An intrepid Allied player may even move an British Air Fleet to Sweden to provide harassing intercepts for a turn, which could delay any campaign being conducted on a shoestring. It usually takes a couple of turns to isolate the capital, and then a final assault on the third or fourth turn. From Stockholm, a direct ground assault to Oslo only takes a couple of turns. An overland invasion of Norway has the advantage of having adequate ground and air units in place to deal with any British intervention in Bergen if they choose to do so.

Are there any compelling reasons for NOT taking Sweden? There is of course the time and the forces required to complete the conquest that must be considered. It takes time to deploy forces, time to conduct the campaign, time to redeploy forces back to the continent, and time to recovery unit losses before the next big campaign. Time is precious, especially if France took longer than expected and the Russian bear is beginning to stir. That HQ and task force may be needed somewhere else, depending on your other ambitions. And USA war readiness is significantly affected by Axis DOW on Sweden by about +18%, potentially bringing them into the war five or six turns earlier. Taking Sweden is generally worth the effort and should be planned for, but understand the risks and weigh your decisions carefully.

The Mediterranean

The Mediterranean Theater becomes active for the Axis when Italy enters the war, which depends upon either German success in France or some pre-emptive action on the part of the Allies. The first order of business is to assure the defense of Italy, since its early loss would be a fatal blow to the Axis. Any Allied abandonment of land positions in the Mediterranean would prompt an early activation of Italy, but naval movement has no effect. This means British and French transports can sail from Europe and conduct a surprise invasion. The Rome garrison begins entrenched at Level 3, making a sneak attack possible but very risky. However, a couple of Corps can easily capture Bari in the south while the Allied fleet can destroy most of the Italian fleet around Taranto on the first turn. If this happens, it's imperative that you op move a German HQ and some air, plus a ground unit or two, down to Rome to stabilize the situation. Withdraw any Italian fleet survivors into the Adriatic ports and hope you have enough air cover to limit further losses.

Your Italian Army and Corps in northern Italy as well as your Sicily garrison should be holding, so any damage should be limited to southern Italy. This will be a bad situation, but not necessarily fatal. It will mean that you are now fighting a two-front war, a reduced effort to fight the French in the north and some effort to defend your Italian fleet and then defeat the Allied raiders in the south. However, Italy and its MPP's have entered early and those additional MPP's will help offset some of the cost of your naval losses. Additionally, USA war readiness will be significantly reduced (about -13%) as a result of this blatant act of Allied aggression, and the loss of those USA MPP's for a three or four turn delay will also help offset the cost of Italian losses. So hang on, stabilize the situation, focus on knocking France out of the war, and then re-establish some sense of order in Italy and the central Mediterranean.

Assuming Italy enters the war normally and is not immediately threatened with invasion, it is still important to guard against Allied naval operations that seek to engage and destroy your fleet. Since Italy normally enters when Germany is near victory in France, Germany can usually afford to send a Luftflotte and supporting HQ to southern Italy to provide spotting and air cover. The French fleet, expendable as it is, is probably prepared to attack and inflict whatever damage it can. Depending on the amount of Allied naval activity, another Luftflotte may be needed to help protect the Italian fleet. In general, withdraw the fleet into the Adriatic, use your Sub as a rear guard, fight off any attacks, and wait for France to surrender and the French fleet to disappear (hopefully) before returning your fleet to southern Italy.

Once the defense of Italy is assured, it's time to look at the situation in Libya. Holding Tobruk will be important for any future operations in North Africa, but initially Tobruk is vulnerable. Without any HQ support, the defending Army may be subjected to repeated British air, ground and naval attack and could be lost early. One strategy is to op move a German Luftflotte to Tobruk. With another in southern Italy, air coverage of the central Med is complete and should allow for transporting an HQ safely to Libya. (The landing may have to be a few hexes west of Tobruk and protected by a fleet escort to ensure it's beyond Allied air spotting range and naval interference range.) Since it will probably take the first half dozen turns to buy an Italian HQ and then transport it, a German HQ could be considered for early deployment. Once the Tobruk

garrison receives HQ support, it can then be reinforced up to full strength while the British in Libya are at the end of their supply lines.

This early situation is very fragile for both sides, and depending on how much effort is expended, the battle could go either way. If the Allies succeed in taking Tobruk and the only Axis port in Libya, all remaining Axis ground units are trapped in North Africa - so that needs to be considered before you dispatch a HQ. It's not impossible to retake Tobruk, but it is a significant challenge to be dealt with later. If the Axis succeed in holding Tobruk and forcing the British to retreat, then a strong central Med position can be established and held - and later serve as the base for future operations into Egypt. The Axis player really has a tough decision to make during this early situation. Defend Tobruk and make Egypt an objective, or cut your losses and let Tobruk fall. If the British have their strength in the Med, then England may be under-defended and *Sealion* becomes a viable option. If the British are weak in the Med, then the Axis has a choice: whether to make North Africa part of the grand strategic plan or not.

Malta will be a thorn in your side, providing the British with some spotting capability in the central Med, but it is generally not a serious threat. Malta was in fact a very tough nut to crack, and there was a reason the Axis avoided it. The Malta Air Fleet is tough to attack directly with its fortress-level entrenchment, so don't bother. Air strikes against the port will draw the British interceptors out and inflict losses, more if you have HQ support. Make sure there is an HQ in the immediate area of your attacking Air Fleets. A Rocket Detachment is also an option, as it can bombard Malta reducing entrenchment levels and doing damage while gaining experience. Port and aircraft losses will become an economic drain on British resources. Some Allied players simply replace the Air Fleet with a Corps or Army early in the game, reducing the spotting capability of Malta but at least avoiding the hemorrhaging of MPP's for expensive aircraft losses. If the Allies do this, it permits free and safe surface raiding by a Sub, which causes a British loss of about 5 MPP's every turn, plus the Sub gains valuable experience. Also, a ground unit on Malta is more vulnerable to repeated air and naval bombardment, so an assault on the island could be considered at some point. However, the time and effort required is prohibitive, and your limited Axis resources can usually be utilized better elsewhere. If and when the Med becomes an Axis pond and the Italian fleets are looking for target practice, then worry about Malta.

The Balkans - Yugoslavia and Greece

Historically, Italy attacked Greece in late 1940 and conducted a disastrous overland campaign that prompted British intervention in Greece and an Allied coup in Yugoslavia. The Axis player does not have to repeat these mistakes. Leaving Greece alone reduces the chance of an Allied coup and conflict with Yugoslavia (and later its partisans), which in turn keeps USSR war readiness low and allows the Axis to focus on other things or gain additional time to prepare for *Barbarossa*. On the other hand, the Balkans does offer quick plunder and resources, and a possible alliance with Turkey is possible if the UK is near surrender and Yugoslavia and Greece are under Axis control. Favorable status with fascist minors is also required for Turkey; i.e., Romania, Hungary and Bulgaria are activated and have not been attacked. It is generally a bad idea to attack one's allies in the first place, and possibly eliminating the chance for a potential ally is another bad idea.

USSR war readiness increases by about +18% for Yugoslavia and only +6% for Greece; USA readiness increases about +8% for each. Since Axis DOW against Yugoslavia significantly increases USSR war readiness, attacking Greece first and then responding to an expected Allied coup is actually a reasonable strategy. Rather than an overland campaign, which won't work unless you have a couple of HQ's for supply linking over the mountains, a seaborne invasion offers a potentially quick campaign. Landing an Army and a couple of Corps west of Athens, plus an air strike from southern Italy and/or Tobruk and perhaps a shore bombardment, the Athens garrison can usually be destroyed in a single turn. Fleets and subs, as well as air cover from Italy and Libya should protect the invasion. Italy can do all this on its own, with or without German air support, but it will take time to build and position the necessary forces depending on Allied actions in the Med. Letting Italy conquer Greece provides them plunder and resources to invest in research and build additional units necessary to become a strong ally. Alternatively, Germany units can perform the invasion and conquer Greece, which allows them to reap the benefits and secure a Mediterranean port for building U-boats.

If you fail to take Athens on the first turn, your landing forces will be out of supply on the following turn unless you landed an HQ (which you probably won't.) Don't panic. Transport an HQ as soon as possible, surround Athens, and then assault it. If you don't already have German air support, now is a good time to get some. Don't continue attacking while unsupplied and risking unnecessary losses, unless you have enough air and naval support to reduce the Athens garrison and a reasonable chance of success. Beware of the British capability to intervene by transporting units into Athens. Bombing the port to less than 5 will prevent transports from arriving, or from leaving if the British have already moved in. Once Athens falls, Greece will usually hang on for another turn or two until the two Greek Armies in the north are sufficiently reduced, so keep pressure on them. That Albanian garrison Corps could actually participate in the initial invasion, by landing back in Albania and using the readiness bonus to hit the Greek Army a little harder. (Yes, this is a gamey tactic to invade your own hex, but every little advantage helps.)

Taking Yugoslavia is both easy and difficult. It's easy because Belgrade usually falls in a single turn as long as the Axis is prepared to act. A German HQ, a couple of Luftflottes, and a couple of ground units should be within range by the target date of March 26, 1941, and ready to attack. A German unit or an Axis minor allied unit can then occupy Belgrade for German control. Alternatively, an Italian unit could occupy the capital if you want the plunder and production to go to Italy. (In fact, letting the Germans take Greece first and the Italians take Yugoslavia later is a very decent strategy for the Axis player to consider.) It's difficult because the actual timing of an Allied coup may be much later, conflicting with your preparations for *Barbarossa* and forcing you to decide if and when to declare war on Yugoslavia. Waiting for the Allied coup provides a freebie attack without increasing USSR war readiness and further provoking the USA. But wait too long and you risk having valuable German units bogged down in the Balkans and unavailable for use against the Russians. You want to have your Balkans flank secured and your units repositioned and reinforced for attacking in force into Russia, and you're going to need a couple of turns to do that. A rule of thumb is for Germany to attack Yugoslavia when Russian war readiness gets around 75-80%, and be prepared to hustle. Or, as suggested, let Italy take Yugoslavia at its convenience and leave the German Wehrmacht free to launch *Barbarossa* when it's ready.

Yugoslavia continues to be a problem even after it's conquered because of partisans. If you don't maintain adequate garrison forces, partisans will appear and harass your rear area, including Italy and Germany. Accept the fact that there is a 15% chance of activity each turn and a 75% chance during winter months. This can either be thought of as an inconvenience, or a valuable training opportunity. Ensure you keep Belgrade occupied and garrison forces in Bulgaria and Albania so partisans can't just march into an undefended city. An additional Italian or German unit in the Dinaric Alps of northwest Yugoslavia completes the garrison.

When partisans appear, engage them and destroy them, gaining experience for your units each time. If multiple partisans are active, then additional help from Hungary or Romania can be brought in. As tempting as it may be to leave a city undefended for even a single turn, beware of the risk that another partisan will appear and steal your city - forcing you to fight to take it back.

As an alternative, if all mountain hexes have an Axis unit or zone of control (ZOC) covering them, partisans will not be created there. Inexpensive Italian Corps make great garrisons, and it is sometimes easier to prevent the partisan problem from occurring than to try to fix the problem.

Spain

Spain could easily remain neutral throughout the game or possibly enter the war as an Axis ally. Of course, it could also fall victim to your blitzkrieg through Western Europe and make Gibraltar vulnerable, or later be the target of a massive Allied invasion to liberate Europe. Three good reasons for not attacking Spain following the surrender of France are: a hypothetical alliance with the Axis is possible if the UK is near surrender and depending on the status of Hungary and Romania as Axis minors; there is an adverse effect on the political triggers for Hungary, Romania, and Yugoslavia; and, increased war readiness of the USA by about +20% which potentially brings them into the war five or six turns earlier. On the other hand, three good reasons for attacking Spain are: plunder plus 56 MPP's per turn; a good chance of capturing Gibraltar and splitting the British empire; and, a virtual connection to North Africa via Morocco and Algeria can be established which would increase the supply level of the Axis resources from five to eight. Decisions, decisions.

If the Axis grand strategy envisions a defeat of the British in the Med, then a grand sweep through Spain and North Africa might be worthwhile. Attacking Spain before Hungary and Romania join the Axis means you lose those minor allies and their additional forces. Either wait until after they join to attack Spain or plan to attack those two minors, since they won't join anyway and you may as well grab their plunder and resources before the Soviets do. A joint campaign in Spain with German air and ground forces attacking out of southern France, an Italian seaborne invasion on the east coast near Valencia, and perhaps a small German seaborne invasion on the northern coast near Bilbao works well. One turn to make the initial invasion and destroy a unit or two in the north, a turn to maneuver toward Madrid, and a third turn to assault and occupy the capital should complete the conquest of Spain. Then, a turn to move units south and another turn or two to bombard and assault Gibraltar should secure the Iberian Peninsula. Having a Strategic Bomber is very useful for quickly reducing the Gibraltar fortress. It is also useful for the Italians to land a Corps in Morocco to garrison Tangier as soon as Spain surrenders.

Once Spain and Gibraltar are under Axis control, leave Italians to defend and op move your victorious German task force back to fight Russia. If you've planned and executed your Spanish campaign well, it can be finished by late spring 1941 together with Yugoslavia and the additional plunder will pay for that final buildup for *Barbarossa*. Once the USA enters, then Italy can take Portugal and dig in for a possible Allied invasion. At this point, all British forces in the Med are isolated. Some ground units can be transported around Cape Horn via the South Atlantic to the Suez, but the Royal Navy cannot be relieved and its destruction can begin. Germany can now build U-boats in Gibraltar to either harass transports in the Atlantic or help hunt down the British fleet in the Med. With the western and central Med under Axis control, all attention can be focused on the eastern Med.



Hypothetical Invasion of Spain

To complete the virtual land connection between Europe and North Africa, the Axis must control Algeria - which generally means that Vichy France must be conquered. This is something the Germans could do prior to attacking Spain, which would provide additional frontage along the Spanish border and better invasion routes to Madrid. Or, this is something that either the Germans or Italians could take care of after Spain surrenders. Since declarations of war against Spain and Vichy France both have adverse effects on USA war readiness (about +20% each), it's a good idea to secure Spain and Gibraltar first. Otherwise, you could possibly see American troops arriving to help defend Gibraltar. Defeating the Vichy Corps garrison in Marseilles is easy, but ultimately defeating Vichy France is difficult because the Vichy government flees to Algiers and can be reinforced with British units.

Invading Algeria is a challenge because the land route from Libya has mountains to cross and the sea route has the British and Vichy fleets to contend with. Taking Gibraltar first makes the invasion of Algeria much easier, since Italian resources prior to a Spanish campaign are usually insufficient to accomplish this task. While the Axis is dealing with Algeria, Britain will probably move a unit into Syria so they can maintain control if and when Vichy France surrenders. Since you probably can't observe what is happening in Syria and the eastern Med, it would be suicidal to send an invasion task force there, so resist the urge to do so. Considering the time and effort required to defeat Vichy France, and the fact that USA war readiness jumps significantly, carefully weigh these costs against the marginal benefit of having improved supply in North Africa and a little more plunder. If you don't conquer Algeria and defeat Vichy France, then you have simply given the Allies a couple of free fleets and another base of operations to threaten Libya and Italy.

Turkey

Like Spain, Turkey could easily remain neutral throughout the game or possibly enter the war as an Axis ally. Or, it could also become a victim of your blitzkrieg through the Balkans and open a backdoor route to the Caucasus and the valuable resources of southern Russia. Good reasons for not attacking Turkey are: a hypothetical alliance with the Axis is possible if the UK is near surrender, Yugoslavia and Greece are under Axis control, and depending on the status of Hungary, Romania, and Bulgaria as Axis minors; there is an adverse effect on the political trigger for Yugoslavia if it is still neutral; and, significantly increased war readiness of USSR (about +34%). On the other hand, good reasons for attacking Turkey are: plunder plus 40 MPP's per turn; and, the opening of a southern front with USSR that forces him to defend more ground against your advancing Army Groups. Additionally, ground attacks toward Iraq and Egypt are possible, which can split the Allied land connection between Moscow and North Africa - preventing UK reinforcement of USSR and the supply level increase of Allied resources from five to eight.

If an attack on Turkey is to be seriously considered, plans must account for USSR war readiness increasing significantly. By the time you're ready to declare war on Turkey, expect it to reach 100% when you do declare war. Whatever Army Group is committed to Turkey will likely remain in that theater and will be unable to support operations to the north. Therefore, it is prudent to have your *Barbarossa* Army Groups ready to go before you provoke the Russian bear with this strategy, and just plan on attacking USSR simultaneously with your attack on Turkey. Italy should be ready to help with seaborne invasion forces and air/naval support operating out of Greece.

The initial assault against the hex northwest of Istanbul can be made by three ground units out of Bulgaria and Greece to destroy the Turkish Corps there. Istanbul can then be assaulted by an Army and heavy air bombardment from 2-3 Luftflottes, followed by occupation by a Corps or Tank Group. Here, additional air and HQ support from Army Group South on the first turn is helpful. An Italian landing south of Istanbul can help isolate Istanbul and provide attack positions on the far side of the Bosphorus crossing, or a landing south of Ankara could be made to make an early advance on the capital. Two Corps with HQ support should be considered for these landings. Additional attacks out of Greece and Bulgaria will be needed to reduce the other Turkish Corps next to Istanbul. Considering the terrain, it will then take about two turns to

advance on to Ankara, with or without some resistance. Some Soviet units can be expected to be defending near the capital at this point, and perhaps some British units as well if they have taken Iraq. Depending on the Allied defense and how quickly you can advance your troops, you should be able to take Ankara in one or two turns and force Turkey to surrender.

Once Turkey surrenders, speed is important to exploit your victory. German Corps and Tank Groups should race to the Soviet border, while the Italians move to secure the southern flank. Italian fleets can break into the Black Sea to destroy the Soviet fleet and provide cover for units being transported from Istanbul. Units can also be op moved forward to Erzurum unless the Soviets have garrisoned that city. It will take a couple of turns to move up your HQ and Armies to begin offensive operations in the Caucasus. By then the entire Russian front should be wide open with your other Army Groups advancing on Leningrad and Moscow when you start attacking through the backdoor. Italy should leave a garrison in Ankara in case the British attempt a landing in the south, but their focus should be on Iraq and Egypt.



Hypothetical Invasion of Turkey

With Syria still Vichy, the extended supply line over mountains from Ankara and narrow frontage into Iraq will make operations there difficult. Declaring war on Vichy France to create a wider front could be considered, but this increases USA war readiness by about +18%. German garrisons in France should be able to subdue Marseilles while the Italian task force in Turkey moves to take Syria. Ultimately defeating Vichy France in Algeria (see earlier discussion) will probably have to wait until after operations in the eastern Med are completed. This is an ambitious strategy to open multiple fronts in Turkey, which can either set the Axis up for victory in Russia and the Middle East, or perhaps spread them too thin across the vast territory they have conquered.

North Africa

As discussed previously, the early situation in Libya is very fragile for both sides. Depending on how much effort is expended by each side, the battle for control of Tobruk can go either way. If the Axis wants to maintain parity in the theater, it needs at least an HQ and air support. To conduct a successful offensive drive into Egypt, they will need more. A German HQ, Luftflotte and Strategic Bomber can help achieve air superiority and suppression of the Royal Navy in the eastern Med. That bomber provides critical long-range spotting capability and naval attack strength, which will help the Italian navy as it moves to engage the British. An Italian HQ and Air Fleet may be needed for support. The initial drive into Egypt will require at least a German Army or Tank Group, an Italian Army, and one or two supporting ground units.

Conquering Egypt is basically a three-step process. First, gain air superiority and defeat the British forces in Libya. Second, advance to Alexandria and neutralize the Royal Navy with combined air and naval attacks. Third, isolate Alexandria with landings to the east if possible and blitz it from the west with repeated air, ground, and naval attacks. If the Allies have taken Tobruk during the early battles, then that first step may be very difficult to achieve. German U-boats operating out of Athens or Gibraltar can help during the second step. If either the Spanish or Turkish strategy have been successfully used and you have either an improved supply situation in Libya or a supporting attack out of Syria or Iraq, then the third step is relatively easy.

Too much depends on the early battles and current situation to provide definitive tactics here, but some general discussion may help. The British can be expected to reinforce their initial garrison via the South Atlantic/Suez Canal transport loop. By late 1940, the British defense should include an HQ, one or two heavy units (Armies or Tank Groups), one or two supporting Corps, and an air unit or two. The Royal Navy in the eastern Med will probably have its Battleship, Carrier, and Cruiser, plus an additional fleet or two, most at some reduced strength (eight factors or less) due to supply restrictions. Or, perhaps the Royal Navy will have a relatively light presence in an effort to spare their fleet from possible destruction. Either way, Egypt is a tough nut to crack and requires considerable effort at a time when Axis forces could be focused elsewhere on defeating either England or Russia. The quality of German units can be used to beat the British in the western desert. The Italian navy can be reinforced to full strength prior to fighting the battered Royal Navy. After the Royal Navy is defeated, landing an Italian unit east of Alexandria isolates the city and accelerates the destruction of its garrison. The Axis can ultimately grind the Allies down and take control of North Africa and the eastern Med.

Is it all worth it in the end? Egypt is worth 15 MPP's per turn. The only compelling reason for either the Axis or Allies to fight for Egypt is Iraq - with its 40 MPP's per turn (64 MPP's once a land connection is established for either side). Egypt provides a base of operations for the Allies to launch an eventual offensive against Italy and the "soft underbelly" of Europe. Eliminating that possible threat strengthens the Axis position regardless of Iraq. However, defeating the British in Egypt does not mean the British are defeated. Their MPP base is essentially intact, the North African drain on their resources is ended, and they are now free to focus their entire war effort on Western Europe. The Axis player must bear this in mind.

If the Axis succeed in taking Egypt, think twice about going into Iraq. USSR and USA war readiness both increase about +18% when Iraq is attacked. The single Corps garrison in Baghdad

can be quickly defeated with experienced German air and ground units, or isolated and assaulted by the Italians. Then, either leave a garrison to defend the two oil resources against possible Soviet attack and redeploy the rest of your units, or consider a push into Russia through the backdoor. But if USSR enters the war, they can reinforce Iraq after you declare war and force you to fight. The Allies will receive those 64 MPP's each turn until you take Iraq. Simply leaving Iraq neutral and an Axis reaction force in Egypt may be worth considering, especially if you are eager to redeploy your German task force back to fight elsewhere.

If you decide to take Iraq and then attack USSR, be prepared for a very difficult campaign over a narrow mountainous front with supply problems until you are able to capture Tiflis. That route usually requires two HQ's to provide enough supply to permit movement and combat through all of the mountains. While this may work, those units can often be better used by sea transporting them back to Europe and then operating them into Russia. Or attack Turkey from north and south and then attack USSR.

Barbarossa

Sooner or later, the USSR will join the war and create a second front. So far, the Axis war machine has been able to conquer France and various minor countries in swift campaigns lasting only a handful of turns. Russia will be different. A successful campaign that results in eventual surrender of the Russian bear will likely last a couple of years and be decided only after many desperate battles deep within the Russian Motherland. It is an awesome challenge that requires considerable preparation prior to initiation - force buildup, accumulation of unit experience, research advances, and political timing. You want to strike at a time of your choosing, and not be surprised by a USSR declaration of war before you are ready. USSR gets full use of their starting MMP's when they declare war first and they get to decide whether to attack or to retreat their forces and establish a stronger defense, so plan to strike first with a bold and aggressive surprise attack.

The political timing of war with the USSR deserves serious discussion. As previously discussed, Germany should keep five to ten units in and around the two Polish border cities from November 1940 onward depending on number of minor allies (Romania, Hungary, and Bulgaria) that join the Axis. The type of ground units does not matter; five Corps until a couple of turns before you attack may be fine. As a rule of thumb, one or two units on the border until October 1940 are sufficient. The "border" can be defined as within three hexes of the USSR border, and that first unit should be in a city (usually Warsaw). Then add one or two units as each minor ally joins. If you don't have enough units on the border the USSR war readiness goes up about 10% a turn. If you have too many units on the border the USSR war readiness will increase greater than 10% a turn. Insufficient Axis garrisons or large buildup of Axis forces along the Soviet border will increase USSR war readiness, so keep an eye on the war map and make adjustments accordingly.

As an inactive neutral power, the USSR's Order of Battle (OOB) changes over time. Prior to the fall of France, the Soviet Union starts with four Corps, six Armies, an Air Fleet, and about 90 MPP's if attacked. After France falls, they start with six Corps, nine Armies, a Tank Group, two Air Fleets, and about 300 MPP's. After they annex the Baltic States, they start with seven Corps,

nine Armies, a Tank Group, two Air Fleets, and about 360 MPP's. This setup has the Soviet units located away from the border, making them difficult to reach on a first turn invasion. Beginning around February 1941, the Soviet OOB reaches its normal level of six Corps, eleven Armies, two Tank Groups, three Air Fleets, and about 570 MPP's. This setup is forward deployed along the border, ready to defend or attack. The starting MPP's continue to grow to a maximum of about 920 MPP's as USSR war readiness increases to 100%.

What about an early attack on the Baltic States and USSR? The USSR occupies the Baltic States on or about July 14, 1940. It may be possible to make an early grab for this minor country after a quick defeat of France or perhaps while the French campaign is in its final stage. Imminent French surrender is important since the Axis cannot afford to fight a two-front war in 1940. The single Corps defending Riga is not too difficult to defeat, but USSR war readiness will significantly increase by about +34% when you attack the Baltic States and begins to steadily increase thereafter. Although a direct attack on the Soviet Union or a simultaneous attack on both could be considered, it is highly advisable to take the Baltic States first and use the plunder to build additional units for a subsequent attack on the Soviets.

If Germany launches an early *Barbarossa* invasion, be aware that USA war readiness will increase about +16%, plus about +8% for the previous attack on the Baltic States, potentially bringing them into the war six to eight turns sooner. An advantage of this early attack strategy is that you have a better starting position from the Baltic States and the Soviet setup is somewhat reduced. The disadvantage, however, is that Axis preparations are also reduced because you have not had time to build a force structure with enough depth to sustain an extended campaign deep into Russia. Nor has the Axis had time to secure adequate resources (Balkans, Scandinavia, Spain, etc.) to fund an extended campaign, or acquire its fascist minor allies for support. Despite some initial Axis victories, USSR will generally be able to recover faster than Germany can build up. An overly ambitious Axis player may soon find himself overextended and fighting to hold off the Russian bear.

The Axis player usually needs all the time he can get to prepare for *Barbarossa*, and if you aren't too aggressive it is possible to delay war with Russia until late 1941 or later. Axis declarations of war against Turkey and Yugoslavia will significantly increase USSR war readiness by about +34% and +18%, respectively, as will a prolonged battle in England after an Axis *Sealion* attempt. So weigh the potential gains of those strategies against the time cost of an early war in the east. Other declarations of war against Greece, Sweden, and Spain only increase readiness by about +6% each, but all move the timetable up and need to be considered. Finally, USSR war readiness begins to steadily increase starting June 22, 1941, by about +3-6% per turn, completing the final march to war.

Germany should not allow the USSR to declare war first. The goal should be to deny the Soviets the opportunity to either conduct a surprise attack or adjust its defensive positions. USSR war entry works like this: when war readiness gets above 90%, they begin preparing for war for about two turns before declaring war. This is when Germany should declare war first. When USSR readiness reaches 100%, they will declare war at the end of the Axis turn. This permits the USSR to act freely and take full advantage of the situation during its own turn. However, there is no Axis surprise attack bonus Germany declares war first or extra starting MMP's for USSR if they declare war first. (Earlier versions of the game would allow a random declaration of war by

Russia at the end of the Allied turn, and this appeared to be an Axis bonus.) Neither side gets a declaration of war bonus, only freedom of action.

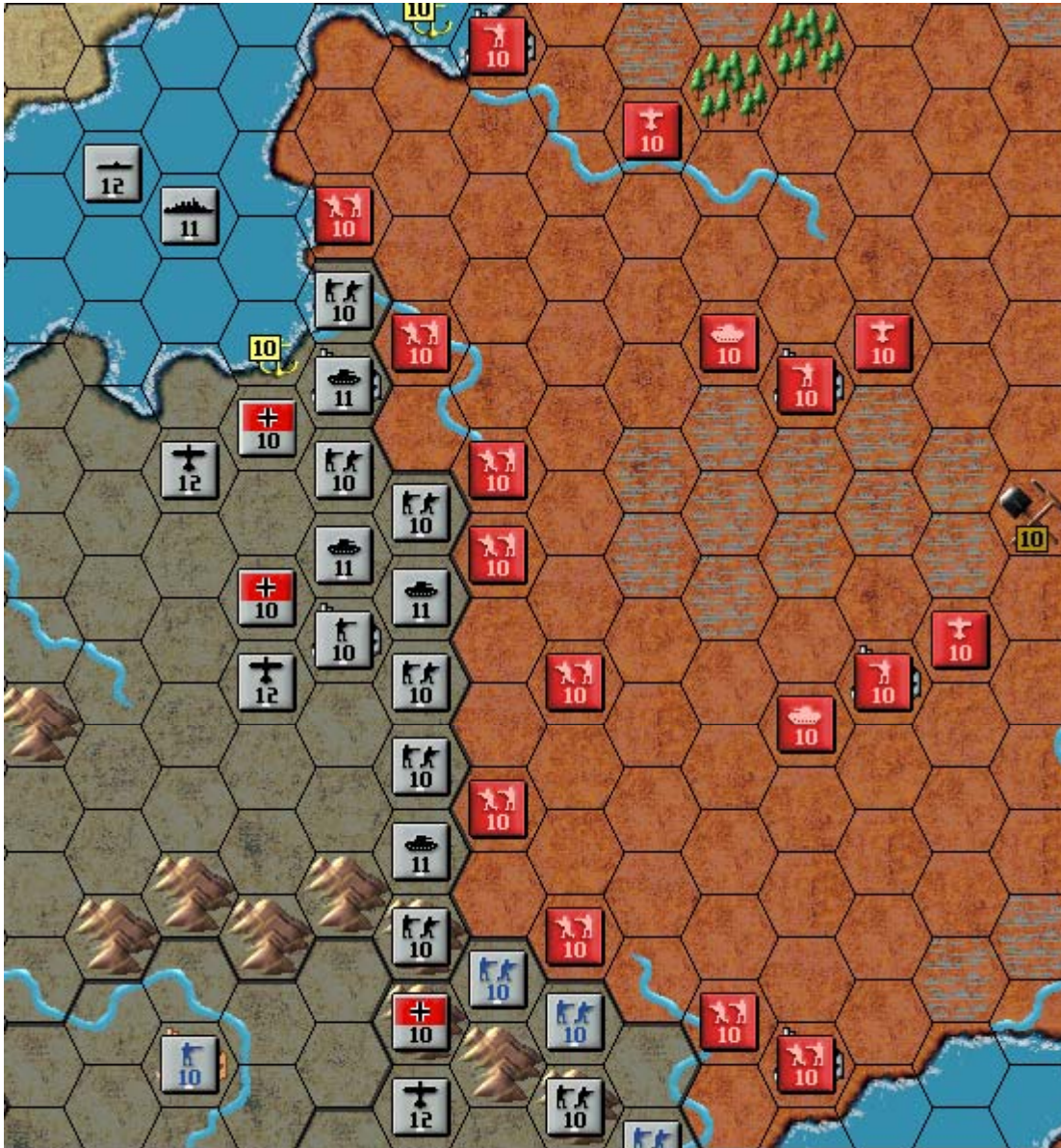
As an alternative, the Axis could let the USSR declare war first. The only consolation for letting USSR declare war first is that you won't see USA war readiness increase by about +16%, which will delay their entry by about four or five turns and provide some additional time to deal with the tougher situation. But the disadvantages far outweigh this minor consolation under most circumstances.

Using history as a guide, the Axis player should anticipate war with the Soviet Union beginning in summer 1941 and make tentative plans accordingly. The historical German OOB for *Barbarossa* on June 22, 1941 included three Army Group HQ's, three Luftflottes, four Tank Groups, and eight Armies, plus a few Corps and your Hungarian and Romanian allies. Additional HQ's were in France and Libya, Luftflottes in France and Norway, and a Tank Group in Libya. Any or all of these other units could have participated in Russia. German units were also highly experienced following their campaigns in Poland, Denmark, Norway, Low Countries, France, Yugoslavia, and Greece. Possible research advances in Anti-Tank Weapons, Heavy Tanks, Long-range Aircraft, Jet Aircraft, and Industrial Technology based on about seven points (1750 MPP's) would contribute to the overall qualitative superiority of German forces at the start of the campaign. This represents a solid balance of forces that beginners of the game should strive to match.

Beginning players should become familiar with the opening moves of the 1941 *Barbarossa* scenario from both the Axis and Allied perspective until they feel comfortable with the historical situation. Experienced players can then make adjustments and tailor their forces to support various strategies. In general, a core force of about three or four HQ's, four or five Tank Groups, three to five Luftflottes and eight to ten Armies will be needed during the opening moves. One variation is to enhance the core force with extra air and/or panzers. Another variation is to build lots of extra Corps. The first provides more combat power, but the second provides greater mobility for getting beyond Minsk and Kiev. There are pros and cons to both. Air-heavy or panzer-heavy variations could also be tried. Whatever strategy you choose, you should always strive to have enough HQ's to support your units (so you will need at least three or four). It's better to have fewer units with adequate HQ support than to have more units without it.

The Axis will need their qualitative advantages to overcome their initial economic disadvantage. At the start of *Fall Gelb* in May 1940, historic Axis production is only about 180 MPP's per turn compared to Allied production of about 280 MPP's. This differential is quickly reversed after Italy enters the war and France is defeated, but the real economic might of the Allies is still untapped. At the start of *Barbarossa* and the Soviet Union's entry into the war, Axis production is up to about 580 while Allied production is now about 640. That is without the USA production of 180 MPP's per turn added in yet. At historical high tide in 1942, Axis production reaches about 690 compared to Allied production of about 615. However, Axis forces are now operating at extended distances from their production centers, spread thin, hampered by partisans and supply problems. Axis units are accumulating increasing losses at the front while rebuilt units are slowly making their way forward, so this apparent economic advantage is tenuous at best. It is at this critical point that either the Axis further tips the balance in their favor to first cripple the Allies and then eventually defeat them. Or else the Allies succeed at turning

the tide to halt the Axis advance and eventually force them back in humiliation. While other operations are proceeding throughout the European theater - in the Atlantic, in North Africa, in the skies over Western Europe - it will be here on the eastern front that victory or defeat will manifest itself as hex control shifts between the colors of gray and red.



1941 *Barbarossa* Scenario, June 22, 1941

Crossing the Frontier

Regardless of whatever force structure decisions you have made or long-term strategy ideas you may have for Russia, your initial attacks should destroy or isolate the nine starting Armies on the first turn. As the historical order for *Barbarossa* directed, "The mass of the army stationed in Western Russia is to be destroyed in bold operations involving deep penetrations by armored spearheads, and the withdrawal of elements capable of combat into the extensive Russian land spaces is to be prevented." A broad and aggressive attack on the first turn is usually sufficient to

trap most of the starting Armies. Alternatively, breakthroughs could be made in the north or south to make deep attacks and destroy a valuable Air Fleet or Tank Group within range. A surprise seaborne invasion could be used to help take out Riga and perhaps threaten Leningrad. (Note that transports in the Baltic Sea do not count against the number of units on the border used to determine USSR war readiness. Some players exploit this feature to launch massive surprise invasions.)

The primary goal for this opening phase is to encircle and destroy the frontier units and secure the Riga-Minsk-Kiev-Odessa (RMKO) line. You will need these four cities and port as quickly as possible to reduce the economic differential and secure your supply lines for your next advance. Bringing in an Italian Army Group to help take Kiev or Odessa will help. The possible techniques for accomplishing this goal are simply too numerous to cover. In general, a first turn surprise attack should shatter the frontier defense. Concentration on two of the four cities with your air should allow you to take them in the first couple of turns, and then the other two within a couple more turns after you shift your air support. Keep building units and pushing forward. The RMKO line should be secured within the first several turns if all goes well.

Finland has a 40% chance of entering the war every turn after the Axis and the USSR are at war if the USA is still neutral, otherwise they may enter once Axis forces near Leningrad. When Finland does enter, and it's usually within the first couple of turns, the Finnish units are vulnerable to Soviet attacks. USSR may move its air force north to support attacks on Finland, and perhaps build an HQ and move tanks in for support. Determined attacks can destroy one or more of the forward Finnish units because their limited supply prevents reinforcement and timely withdrawal. Even if you manage to withdraw these units and hold off a Soviet attack, the supply problem remains and will prevent any effective offensive activity in this theater. A small German force of an HQ and Army should be immediately transported to Finland to help defend it and later support attacks on Leningrad. Having an HQ in Finland is critical. Later, another ground unit and perhaps a Luftflotte can be sent to provide additional support. If an HQ is not sent to Finland to solve the supply problem then the border Finnish units should be withdrawn to Helsinki as quickly as possible.

With the Scorched Earth option on, fleeing Soviet forces will destroy any city or resource captured by the Axis within the USSR. This results in an immediate value and operational strength of zero. This means that as you capture the cities in the RMKO line and beyond, they will initially be useless to you for supply. You must rely upon your cities farther back and your HQ's. Distance from a valid supply source and movement both affect a unit's supply and readiness. Watch the supply value of your HQ's. If they become unsupplied, the supply they provide to your combat units will drop from eight to five. Since occupied cities in the USSR will have a maximum strength of five, your HQ's will never provide supply greater than eight unless linked. Friendly HQ's can be linked to supply each other over extended distances, so it helps to have enough HQ's to do this.

Similarly, watch the supply value of your lead units to ensure they are not overextending themselves, making their attacks ineffective and becoming vulnerable to counter-attack. Remember that reduced supply affects not only readiness for combat, but also imposes penalties on unit action points and reinforcement strength. Initially, supply becomes a problem for units

pushing too far past that RMKO line before it is secured. So keep an eye on those lead units and understand your supply limits.

To additionally complicate matters, Soviet partisan activity behind your lines will disrupt your supply lines and threaten your captured resources. As in Yugoslavia, accept the fact that there is a 15% chance of activity each turn and a 75% chance during winter months, but Soviet partisans inflict a supply penalty by reducing the strength (variably) of any captured Soviet resource within six hexes when they first appear. Watch the supply value of your units and be prepared for occasional setbacks. Keep your captured cities garrisoned and use partisans as training opportunities for your new units marching to the front. Be sure to reestablish control of any hexes the partisans have moved through, as these could later be used to cut off a direct connection between your occupied Russian cities and resources and your capital in Berlin, reducing their strength from five to three. (Remember, occupied cities or resources in the USSR only have a maximum strength of five, not eight.)

Alternatively, if Axis units or ZOCs cover all conquered Russian marsh and mountain hexes, then no partisans will appear. The cost of extra garrison Corps is often worth totally eliminating the partisan problem while preserving one's conquered resource values, MMP's, and supply values.

Driving into the Motherland

Once your initial goal of securing the RMKO line and assuring the defense of Finland is accomplished, the Axis will now have to define a particular strategy to break the Russian bear's back. Axis options are: the Riga-Leningrad line to link up with Finland and attack Vologda and the Urals; the Minsk-Smolensk line to attack Moscow and the Urals; the Kiev-Kharkov line to attack Voronezh or Stalingrad and split Russia in two; or, the Odessa-Rostov-Stavropol line to grab the Caucasus resources. Additionally, if the Turkish strategy has been successful then you should have another option: the Tiflis-Grozny line to grab the Caucasus resources from the south. No single option is likely to be decisive. Some combination of any or all may be used simultaneously or sequentially. But your initial objectives should at least include the three mines along the Dnieper River to further reduce the economic differential. The loss of those 60 MPP's per turn will hurt the USSR's ability to reinforce losses and build new units, and allow the Axis to push ahead with whatever strategy has been decided on.

Before proceeding, the Axis player must understand what it takes to defeat the USSR. First of all, the USSR has a three-city supply system. Moscow, Sverdlovsk, and Stalingrad are all central supply areas, so you cannot simply encircle and capture the capital. Nor can you simply split the country in two by isolating the units in the south; they will continue to fight while Stalingrad endures. (The USSR would be unable to build new units in cities cut off from the capital, but still able to supply and reinforce units from Stalingrad.) When you do capture Moscow, the government flees to Sverdlovsk and then to Stalingrad, or vice versa, so capture of all three cities will be required to force USSR to surrender. Therefore, mentally prepare yourself now for the desperate battles ahead against the gates of Moscow, the rugged mountains of the Urals, and the entrenched defenses on the eastern bank of the Don River. To ultimately succeed in this daunting task, the Axis will have to destroy both the Soviet armies in the field and the USSR's means of waging war; i.e., capture its resources.

Historically Germany destroyed an incredible number of Soviet units and advanced as far as the Smolensk-Kharkov-Rostov-Stavropol line and captured the mines in the Caucasus. Historically Germany lost, so you will have to do better than this in order to win. To complicate matters, with the War in Siberia option off you will see a transfer of Siberian divisions to the defense of Moscow. This transfer usually occurs when Axis units advance to within about three hexes of Moscow or Stalingrad. For the most part the "formula" is based on the overall strength of entire Axis forces versus Allied forces (mostly Soviet) coupled with distances to selected cities/areas and the number of units within range with each selected city/area having it's own set of variant conditions. Siberian transfer units include at least an HQ, an Air Fleet, a Tank Group, a couple of Armies and a couple of Corps. The exact composition and timing of the Siberian transfer depend on the Difficulty level selected for your game and the randomness of the trigger formula, so it's difficult to predict. These units will arrive in the Urals at the start of the Allied player's turn and will probably start appearing on your front line a turn or two later, usually where your lead units are most vulnerable.

Winning in Russia will require the Axis to destroy Soviet units faster than they can be replaced. Initially, the valuable experience of your units gained in the west and the additional experience gained in early victories will help. But as your losses accumulate and reinforcements reduce experience, and Soviet tech advances begin to improve the quality of his units, simply battering the Red Army units into submission will become more difficult. It is important to focus on unit destruction, because building new units will drain USSR resources faster than reinforcing losses. USSR begins the campaign with a production of 480 MPP's per turn, which is reduced to about 370 once the RMKO line and the three mines have been captured. Depending on their Industrial Technology level, the Soviet Union's ability to keep up with its losses is still very good at this point and even dangerous for the careless Axis player who has failed to properly prepare for this campaign or has overextended himself beyond his supply lines. The Axis player must continue to push on and capture Russian resources while destroying units along the way. Knocking USSR down to below 300 is necessary for breakeven, which means capturing another six to eight cities or so. This will likely be a struggle in most games.

Assessing your operational options is now a bit clearer once you understand the grand strategy goals for defeating the USSR and appreciate the challenges. Attacking in the north to capture Smolensk, Moscow, Leningrad and Vologda will likely destroy important units and open the way to attacking the Urals, but the terrain is difficult and taking those four cities and port will reduce USSR production by another 60 MPP's per turn. Attacking in the center to capture Kharkov, Voronezh and Stalingrad will require difficult Don River crossings. Taking those three cities is only worth another 30 MPP's, but it will split Russia in two and allow you to focus next on either the north or the south. Attacking in the south to capture Rostov, Stavropol and Grozny will require attacking through the Crimea and the fortress at Sevastopol and/or difficult river crossings at the lower Don near Rostov. But all of those resources in the Caucasus total almost 190 MPP's! Taking the Caucasus region will starve the Soviets of MPP's faster than anything and block any British reinforcements but takes time and leaves a long flank exposed. Historically, the objective of *Fall Blau* (the Axis 1942 campaign) was the Caucasus region and its resources.

The possible techniques for executing these operational options are simply too numerous to cover. Some general ideas may be helpful though. Air superiority is important, both in terms of quantity (4-6 Luftflottes or more) and quality - leadership, experience, and Jets research. Heavy

Tanks research will initially help your panzers that are crucial for achieving stunning breakthroughs and encirclements on the Russian steppes. But the high cost of losses will take its toll as enemy anti-tank defenses improve and your panzers lose their effectiveness. Don't forget about your own infantry. Anti-Tank Weapons research will not only boost their *tank defense*, it increases their maximum strength values and that is often more important in the long run. Capturing cities with heavily entrenched defenders generally requires surrounding them (which cuts them off from the capital, reduces the city strength to five, and reduces maximum unit reinforcement strength to 9 or less). But direct assault from two or three hexes with massive air support can also work. Consider shifting your main attack occasionally from one axis to another by relocating your Luftflottes and panzers faster than the Soviets can shift their defense; i.e., use FOW to your advantage. Try to maintain a cohesive front line to prevent Soviet Corps from breaking through and creating isolated pockets of your lead elements. It is often more efficient to advance a little bit slower than to have to fight to free out-of-supply units later. Consider seaborne invasions to support your drives on Leningrad and the Caucasus. Lastly, continue to practice all the tips and tricks you have successfully employed in the game up to this point. It will take all the skill you have to defeat your Soviet opponent on his home ground.

Victory or defeat on the Russian steppes?

A broad front attack that exploits whatever weaknesses the USSR develops (and there will be weak spots if you force him to defend from the Baltic to the Black Sea) usually works as well as any overly scripted strategy. Against either a human opponent or the computer AI, the Axis player will often be forced to make concessions and improvise on a strategic level. However, the goal of wearing down the Red Army and forcing the USSR below 300 MPP's per turn must always be kept in mind. Usually, a desperate series of battles end up being fought in late 1942 or early 1943 along the Moscow-Stalingrad line which results in either an Axis breakthrough and probable USSR surrender in 1943 or 1944, or the Allies turn the tide and start pushing the Axis back. The Axis player must force a decisive breakthrough or shift over to the strategic defensive.

Exactly when this critical point occurs in the game is difficult to detect. An Allied invasion in Western Europe or Italy, an increasingly effective strategic bombing campaign, or some other critical event elsewhere can help tip the balance of power on the eastern front. A virtual stalemate typically occurs which lasts several turns and is broken when one side or the other captures a key city. Once this happens, the victor usually gains the initiative and the front becomes fluid. From that point on, things can happen relatively quickly. Either the Axis drive forward to finally assault the Urals and defeat the USSR, or the Soviets muster a successful counter-attack to take back first one city and then the others in rapid succession as they gain momentum.

If the Axis is successful in driving on to Vologda and the Urals, that mountain hex southwest of Sverdlovsk is key. It can be attacked from three sides. Once it is captured, the mountain hex to the north should be attacked. Now Sverdlovsk can be attacked from those two hexes, supported by massive air bombardment. Focus on Sverdlovsk. Partisans and supply problems may delay these attacks, but eventually the relocated Soviet capital will fall and the USSR will surrender. Flush with plunder and relieved of a two-front war, the Axis can then devote full attention to defeating the UK with a *Sealion* invasion of England supported by massive air bombardment and

U-boat wolf packs. After the UK is defeated and plundered (usually within a year of USSR surrender), the game is over except for a final invasion of the USA supported by several Carriers and Battleships.

If the Axis are not successful in forcing that final breakthrough, it is important to recognize as early as possible that the tide has turned or is about to turn. Once you realize that you cannot win, it's time to start thinking about not losing. Rather than risk the loss of your veteran units in futile attacks and Soviet counter-attacks, it's a good idea to make an orderly transition to the strategic defense. Start withdrawing units to good defensive positions. Protect your HQ's and occupied cities (your supply sources), reinforce unit losses, establish reserves behind your lines to react to Soviet breakthroughs, and balance your forces according to potential threats. If you don't do this at the correct time and allow the Soviets to gain offensive momentum, you will be hard pressed to stabilize the front and prevent disaster. That old RMKO line back behind the Donets River makes a good backstop as you consolidate a defensive line with veteran units slowly retreating and fresh units moving forward. Fight to hold Smolensk, Kharkov, and Rostov for as long as possible to delay the Red Army advance as you build this defensive line and try to stabilize whatever breakthrough the Soviets have achieved.

Fortress Europa

The Axis player must deal with a basic dilemma for most of the game. To win, you must be aggressive and take risks if you hope to defeat the UK and USSR. This necessarily means applying a principle of war known as "Economy of Force" where you minimize your forces in secondary theaters in order to mass your forces for a single, main effort. Multiple, diverse efforts are generally not successful. While focusing on your main effort, your secondary theaters become increasingly vulnerable as the Allies grow in strength. Thus, the grand strategy needed to win also contains the seeds for failure. If the Axis throws everything into *Sealion* in 1940-41 to focus on defeating the British first, they risk having the Soviet Union strike in the East. If the Axis throws everything into *Barbarossa* in 1941-42 to focus on defeating the Soviets, they risk having the British and Americans strike in the West and/or the Med. FOW will help to hide some of your weaknesses, but sooner or later the Allies will find them and exploit them. You will have to maintain some defenses in your secondary theaters, but if you commit too much to defend against potential threats everywhere then you probably won't have enough to succeed with your main effort and achieve your goal - to win. Once it becomes clear that the tide has turned and the Axis cannot win, you should balance your forces to adequately respond to the various threats. Being able to gracefully transition from a "whatever-it-takes-to-win" mindset to a more conservative defensive strategy is a challenge for many players, both experienced and inexperienced.

The rest of this general Axis strategy discussion will assume that a semi-historical situation exists in the game during the 1942-1943 time period. This means the UK is still in the game and maintains a solid position in North Africa, the USA has entered the war and has had time to build up some offensive capability, and Axis forces are deep within Russia but essentially stalemated. Axis conquests may or may not have included Sweden, Spain or Turkey. At some point, it is assumed that something happens to tip the balance in the Allies favor. This could be an invasion of either Italy or occupied France, perhaps a raid or a successful bombing effort, or

some other distracting event combined with a successful counter-attack by the Soviets somewhere on the Eastern Front. Whatever happens, the initiative is passing from the Axis to the Allies, forcing the Axis player to think defensively for perhaps the first time. The challenge for the Axis player now is to hang on and prolong the war to May 7, 1947 to achieve a stalemate victory condition in the game. Or at least beyond the historical end date of May 7, 1945 for personal pride if nothing else!

Defending Italy

Two very basic principles will help protect Italy from Allied invasion - garrison all your cities for maximum entrenchment benefit and maintain some air support for spotting Allied naval activity in the central Med. This is so simple it compels understanding, but often forces are deployed elsewhere and the defense of Italy is neglected. Having units in place for spotting is key, because that at least provides a turn to build or op move additional units in to oppose seaborne invasions. Ungarrisoned resources have a spotting range of only one hex, ground units two hexes, and air units at least five hexes, so know where your blind spots are. It is quite possible for British Carriers to observe ungarrisoned cities, transports to move within two hexes (beyond spotting range), and enemy units to unload adjacent to the city and move in unopposed before you even get a chance to react. Avoid letting that happen. Generally, a Corps in each city and another Corps in reserve in southern Italy is a good setup. A Strategic Bomber with long-range spotting and naval attack capability would be very good to have.

If Italy is well defended, the Allies probably will not risk any landings beyond the range of their land-based air in North Africa. Sicily is the natural target for an initial invasion, so an Army garrison in Palermo would be especially useful for delaying an Allied timetable for quick victory there. This unit would be vulnerable to air and naval bombardments, but at least it would buy some time and hopefully delay an invasion. What you really want to accomplish in Sicily is to prevent an easy Allied victory without losing too many MPP's in the process. With air support from Libya, where the Tripoli supply strength is probably up to eight if the Iraqi path to Moscow is open, the Allies will simply beat the hell out of any Axis units on Sicily. Hold onto the island long enough to make the Allies work for it. Once they take it, Palermo only provides supply strength of five while your units on the mainland will be fully supplied. Wait for the main battle to come to you where you have an advantage. Up north near the city of Bari where the Allies are limited to a single-hex attack frontage is where you want units to entrench and make a stand. Trying to defend farther south along the toe is usually futile because your units are exposed to repeated air and naval bombardments.

Infantry units should be used to defend Italy. This is not good tank country, although a Tank Group would be very nice for counter-attacking if a hex gets taken. This is a campaign of individual hexes. Italy should certainly have an HQ in southern Italy to provide leadership, and Germany should have one here also if there are any Luftwaffe air units. Looking ahead to the possibility of Italian surrender, the Axis player may also want to consider replacing the northern Italian and Balkan garrisons with German units and allow them time to get fully entrenched. Move the Italian units south to cover possible landing sites near Bari and Rome. For now, hang on to southern Italy as long as possible while the Allies are struggling with supply issues and trying to keep their forces strong enough to be effective. Italy's production without Libya and Sicily should be about 90 MPP's per turn plus 16-24 for Greece or Yugoslavia. This is sufficient

to keep up with reinforcements while defending the Italian mainland. Try to keep up with your losses and hopefully keep the Allies bogged down.

The next line of defense for Italy is the Apennine Mountains south of Rome (the "Gustav Line"). An Army well entrenched here will generally hold up the Allies for several turns, so plan ahead and have one positioned there early so it can dig in. A unit can entrench to Level 4 in a mountain hex. Keep holding this line, forcing the Allies to hit it with repeated attacks and hopefully taking more losses than they inflict. Attrition warfare will eventually wear down the Axis, but it is also possible that the Allies will be exhausted in the process. Look for opportunities to possibly rotate your damaged units out of the line and counter-attack with fresh units rather than reinforce losses that turn. You may lose some entrenchment value, but hopefully destroy a weak enemy unit. Any Allied unit you destroy will require time to replace, and could cause the entire Allied campaign to stalemate for a while if they don't have adequate reserves in the area.

Once Rome falls and Italy surrenders, there are still good defensive lines to the north that Germany needs to hold. The Italian cities of Torino and Venice should be garrisoned with German units as soon as the surrender of Italy appears likely. The Apennine Mountains and Po River provide excellent obstacles for the Allied advance and create supply problems for their lead units. This northern line of defense along the Po River (the "Gothic Line") can often hold for several turns. As a final defensive line, the Alps of northern Italy and southern Germany will block the Allied drive into the German Fatherland.

Defending Occupied France

Until late 1942 or early 1943, defending France is not too difficult. The Axis player can expect some air and naval bombardment of Brest, perhaps some strategic bombing, and maybe even a raid or two to test your resolve. A Corps garrison in Paris, Brussels, Brest and Bordeaux is usually adequate. An experienced Army or two from the Battle of France will provide additional defense, plus save the costs of moving units back later from somewhere else. An HQ and at least one Luftflotte are very also helpful. An HQ positioned just above Arcachon within five hexes of Brest will provide its command rating to the garrison there to help it survive bombardments and minimize losses. And a Luftflotte or two under HQ control is often enough to maintain parity with the Allies until they are strong enough to fight for the airspace. A U-boat or two patrolling in the Atlantic can inflict shipping losses, gain experience, and hopefully provide an early warning of Allied invasion.

These are prudent measures that will help protect France from invasion, but they require valuable units that will most likely be needed in Russia. As with Italy, the Axis player could choose to lightly defend France and assume some risk in this secondary theater. Just don't forget about France, and the fact that time is working against you. In Russia, you should have three or four Army Groups attacking between Leningrad and Rostov, and perhaps another in Finland and one in the Crimea, for a total of five or six HQ's or more. Once Leningrad or Sevastopol falls and you can afford to redeploy an experienced HQ back to France or build a new one, then do so. Or at least have one earmarked to move back to France on short notice. By 1943, you should have an Army Group with at least four or five ground units and a Luftflotte organized to defend France. As time goes on, a couple more units in reserve near Paris are useful for reacting to potential landings and more Luftflottes may be needed to counter increasing Allied air strength.

There are several options available for defeating an Allied invasion of France. First is to prevent one from happening by aggressively controlling the seas. Several (three to five) U-boats plus some of your fleet that breaks into the Atlantic could succeed in destroying enough Allied fleets to gain sea superiority and delay any credible invasion attempt until the Allies have a chance to rebuild. This is an expensive choice, but could delay the Allies from opening a second front in Western Europe until 1944 and allow the fighting in Russia to proceed without distraction. Another option is to defend the beaches. If inexpensive Corps units cover most landing sites, the Allies can't land. But this is also an expensive choice since there are so many hexes to defend and the defenders could be better used fighting elsewhere, yet it will delay the Allies in the west. Another option is to have an adequate counter-attack force available, including a Tank Group or two. Allow the Allies to land in force and then destroy them as they struggle with supply problems. Every American Army you destroy will require about 2 turns to replace, plus the time needed to transport the new unit to Europe. Loss of an entire Allied invasion force over a period of several turns could take about a year to replace before another credible invasion can be mounted.

These are all viable options for the Axis player to consider but they all require a commitment of resources to France that some players won't make in time for them to be effective. Some compromises will be necessary, with the result being that at some point a successful Allied invasion secures Brest or Arcachon or Brussels as a supply source and establishes a solid bridgehead on the continent. As more Axis resources are committed to defend this new front, less are available to defend against the Soviets advancing from the east. As Allied MPP's continue to grow and Axis MPP's continue to decline, attrition warfare will take its toll. Holding Paris for long is difficult and generally not worth the cost of unit losses. Besides, it's often better to let the Allies liberate France and have those MPP's go to the French rather than the British or Americans, where they can only be spent on cheap French infantry instead of high tech aircraft reinforcements. Fight long enough in France to contain the Allied bridgehead until they break out, then withdraw to the Brussels-Rhine River line and dig in. The anti-aircraft defense bonus for Brussels and the French mines will help the Axis hold those valuable resources for a while, but ultimately it will be behind the Rhine River where Germany must make its final stand.

Defending the Fatherland and Axis Minors

By late 1944, Axis options are pretty limited. So are your MPP's. If you play against the Axis AI you will notice that it has a very bad tendency to keep spending those limited MPP's on expensive aircraft and HQ reinforcements rather than cheap infantry units that can actually defend something. You, the Axis player, should note the weakness of this strategy and focus on a more effective defense. Your Luftwaffe can be partially effective for a while, but at some point becomes useless. If your Luftflottes are in range of direct enemy air attack by multiple units and at risk of being destroyed, then they are too close so move them back. The most effective use of them now is for intercept, a single combat with manageable reinforcement costs. As the Allies close in from all sides, sooner or later there is no more room to retreat your air units. Moving them to someplace safe like Norway usually accomplishes nothing, so consider disbanding them for useful MPP's. Same for excess HQ's; disband them. Germany may have five or six HQ's as it withdraws back into the German Fatherland, but as the number of units decreases and you're falling back onto your home supply sources those excess HQ's become worthless. Keep the best HQ's, the ones with high command rating and experience, but get rid of the ones you

don't need. And don't forget about research points you may still have. A couple of points for Anti-Tank Weapons or Anti-Aircraft Radar may be good, but most everything else is a waste at this late stage of the war as Berlin comes under siege. Reclaim those useless points for 125 MPP's each and use them to build or reinforce Corps and Armies. Your panzers are still useful with their *Air Defense* value of three so use them to defend your key resources, especially if you've received Anti-Aircraft Radar advances.

Germany has a few things in its favor as it withdraws closer to home. For one, it has good defensive terrain - rivers in the east and west, mountains in the south. For another, it should still have good leadership with enough HQ's for everyone plus excellent supply. Lastly, the Allies will be struggling to advance their slow Armies and HQ's and dealing with supply problems. Plan ahead for defensive lines by moving weak units back and then reinforcing them while they gain entrenchment benefits. Maintain a cohesive defense to prevent units from being cut off and destroyed. Build Corps. You should have enough surviving Armies that you don't need more. Just as your blitzkrieg was successful in earlier years with encirclements and rapid maneuvers, so shall the Allied operations be if you let them. Make the Allies fight at a disadvantage wherever possible and take losses. Because if you don't the Allies will continue to grow ever stronger. Protect your valuable resources for as long as possible, particularly your mines and Romanian oil fields. Watch for your distant resources getting cut off from Berlin, because once that happens their strength drops from ten to five and your defending units will wither away. So fight to keep your lines of communication open for as long as possible. If you manage to develop a coherent defense, make your MPP's stretch, and force the Allies to fight hard for their victories, Germany can prolong the war.

III. ALLIED STRATEGY

General

The Allied side is generally in a much better situation economically than their Axis counterparts, but do suffer from smaller sized and less experienced armed forces in the early stages of the war. As a result, Allied strategy can be of a much more wait and see style doctrine where holding the line and constantly building up your forces is often all that can be done to hopefully turn the tide.

Hanging on for dear life is critical in the early years of the war. By *Fall Gelb*, France will be in a precarious fight for survival while the UK has the choice of shoring up the French defenses or leaving its units in England to prepare for a possible Axis invasion. Delaying the capture of Paris as well as protecting the UK navy for future defense may be more than enough to guarantee long-term survival. Prior to USA and USSR involvement, the UK should actively protect resource rich areas such as the Middle Eastern oilfields in Iraq from Axis expansionism. Even defending a neutral area that does not add to your own MPP income can be beneficial as it denies these resources to your enemy as well.

Once the USSR gets involved, using the scorched earth defensive strategy is a very effective way to prolong the battle for Mother Russia. Keeping a minimal defense on the front lines and pulling back the bulk of your forces to defensive positions deep in Russia and behind river hexes

may cause your Axis opponent to overrun their supply and grind their offensive to a minimal pace. This may at first seem to be a risky strategy, but does allow for a masterful counterstroke as opposed to constantly taking losses in a perpetually defensive posture. USA involvement allows for more of an active role in the west as your combined UK and USA forces can occupy Axis attention in North Africa, Italy, or perhaps an early drive through France. Bombing campaigns from England and persistent threatening postures in the aforementioned theaters can often be more than enough to distract Axis forces from Russia and take some of the pressure off the USSR. A combination of these tactics can often snatch victory from the jaws of defeat.

Opening Moves

The defense of Poland is a hopelessly lost cause. The Allies have essentially two options: either reinforce losses and fight as hard as possible, or let Poland fall with minimal or no support. If Germany pulls units away from Poland on the first turn to prepare for an early attack in the west, then your initial losses may be light and a rugged defense of Poland may be possible. Reinforcing at least the infantry losses will prolong the battle, while reinforcing air losses is generally not cost effective. Move the surviving air unit to the east somewhere and make the Germans hunt for it, or sacrifice it by moving it to a blocking position near Warsaw. If you can attack a German fleet that moves into Königsberg or maneuver your units to cut off some German units, then do so. Denying Polish plunder for as long as possible is the goal, since future Axis operations depend on MPP's. If Germany is committed to blitzing Poland in a short campaign, however, then it may be best to not reinforce losses and let Poland fall gracefully. Not only will Britain waste MPP's, reinforcing Polish units allows German units to make additional attacks and simply provide them free experience that will be used against you later.

Before getting too deep into Allied grand strategy for winning the war, consider carefully the victory conditions that may lead to an early loss. Total victory in the game is achieved whenever one side has successfully defeated all other currently activated major countries in the game. So, with only the UK and France as the major Allied countries currently at war, if they both surrender then the game will end in an early Axis victory. The USSR and USA will not usually enter until 1941 or possibly 1942. It is up to the Anglo-French coalition to fight Germany (and later Italy) alone. The conservative strategy is to hang on for dear life and wait for your allies to join the war. Anything to delay the fall of France and encourage the early entry of your allies should be your priority.

Alternatively, an ambitious Allied player could consider a more risky approach. One could go on the offensive early to take the war to Germany or to Italy and possibly defeating them before they grow too strong.

Risky Allied Strategies

One early attack strategy is the "Dutch Gambit." Here, the Low Countries are taken on the second turn, possibly the third, in an opening offensive to grab some quick plunder and establish a strong defensive line along the Rhine. Two Carriers, a Battleship, three French Armies and two Air Fleets can attack the Low Countries as early as the second turn. Attack with French Armies first and then with your British RAF. The Carriers are backup, and it's best if they do not need to

be used. The UK can disband its Strategic Bomber and buy an Army on the first turn, enabling them to transport it into Brussels when the capital falls rather than have the French completely strip their Maginot line. If Belgium falls without needing the French Air Fleet, then it could be disbanded and a French HQ built. You will have to replace any Armies from the Maginot, either with French Corps or possibly British or Canadian Corps, because it can be a tragic mistake leaving a gap in the line when the Low Countries fall. Some players have even placed an HQ and air units there temporarily while other units are brought up. If this gambit is properly executed, it gives the Allies a beautiful defensive line and limits the MPP's that the Axis can get prior to attacking France. Bringing up the Malta Air Fleet and moving the British Carriers into range gives the Allies air superiority. Breaking this line will be tough for the Axis, and expensive.

The Dutch Gambit is usually an All-or-Nothing type deal, hence the name gambit. The Allies can establish a very tough defensive line, but typically lack the strength to break an equally tough German defensive line on the other side of the Rhine River and drive into the German Fatherland. It will only buy time, since it will take a determined Axis opponent considerable effort to break through. However, the Allied attack will cause USA war readiness to be significantly reduced (about -13%), and this will delay entry of your future ally by four to six turns and the loss of about 900 MPP's. Italian war readiness will be increased, bringing them into the war sooner than normal. The time you buy for France may or may not be worth the economic cost in the long run. And while Axis costs may be high and they are denied some plunder, Allied costs will be equally high. Loss of valuable British units, an Army or a Carrier for example, will be difficult to replace after France falls and the UK stands alone.

A daring variation of this strategy is to declare war and destroy the two minor Corps with air, ground and naval attacks, but not occupy Brussels. (Of course, this could be your Plan B if you fail to take the capital in the first place.) Establish your defense around the capital and behind the Rhine. This will give the Low Countries to Germany as a minor ally but deny the Axis its plunder. The UK or USA can then claim the plunder when they "liberate" the country later during the war, which could provide a nice boost if you survive long enough to receive it.

A related strategy that could be used with or without the Dutch Gambit is the "Baltic Gambit." Here, Allied fleets are sent into the Baltic Sea to hunt and destroy the German Kriegsmarine navy while the Axis is focused on activity in the Low Countries. You could possibly catch the German fleet out of port or intercept an invasion of Norway. If you can destroy or damage the Kriegsmarine, it will significantly limit Axis ability to threaten England with invasion. To be successful against the Germans in the Baltic, however, your fleets will have to force their way through the narrow passage past Copenhagen. They will be vulnerable to air attack from German Luftflottes in range. And if the German fleets are in port, it will be very difficult to inflict more damage on them than you will take in losses. While the French fleet may be expendable, your Royal Navy is not. Risking heavy losses here may leave England wide open for an Axis seaborne invasion later.

Another early attack strategy is the "Italian Gambit." Here, UK and France conduct a surprise attack on Italy to defeat or cripple it. A couple of French units can be transported out of Marseilles for a landing in southern Italy as early as the third turn. Or British units can be sent from England for a later attack. Since abandoning Allied positions in the Med may cause Italy to declare war early and risk losing the element of surprise, these invasion units really should come

from outside the Med. Italian war readiness increases about 2-10 % per turn depending on which units you move and how many, except for naval units that can be moved freely. If you're willing to take that risk (and you'll only have about one or two turns for surprise), the Corps in Gibraltar and Algiers could be used. The Algiers Corps can make the trip in one turn. The Gibraltar Corps will take two turns so could be a follow-on force but should not be part of the main landing if you want to ensure surprise. Meanwhile, British and French fleets should be moving toward Malta to strike at the Italian fleet and this will take at least two turns.

So start moving the fleets on the first turn, the transports on the second turn, and attack on the third turn. When you do declare war and attack, land your ground units first, move into the city of Bari, and attack the Italian fleet in the port of Taranto from the land. Move your fleets in to attack the Italian fleet southwest of Taranto and spot the Italian Sub. Then attack the Sub and hopefully complete the destruction of most of the Italian fleet - a Battleship, a Cruiser, and a Sub. The other two Battleships will probably seek safe haven in the ports of Venice and Tirana, and these will be difficult to destroy. Don't forget your backdoor when you attack; leave a garrison in Marseilles.

You probably do not have enough strength to attack the Italian ground units in the north. Nor will you usually have enough strength to attack Rome, because the Corps there will have an entrenchment value of three. It may be possible to launch a successful sneak attack on Rome by early 1940 with your British Strategic Bomber in Marseilles, the RAF in the French Alps to the northwest (six hexes from Rome) and a British HQ for support. Naval bombardment, carrier attacks and landings on either side of Rome to attack and then occupy the capital may succeed, but is highly risky. Even if you capture Rome, Italy may not immediately surrender and could be rescued by Germany. If you fail to take Rome, your invading units will be out of supply and Axis reinforcements can be sent to defend the capital, so you probably won't get a second chance and your units will eventually be destroyed. But if this gambit is successful and Italy surrenders, the Allies will be well on their way to an early victory!

Timing the Italian Gambit to occur just as Germany launches its attack into the Low Countries and France may help distract the Axis and help prolong France's survival. And you may be successful in destroying most of the Italian fleet, and this will help your defense in the Med. As with the Dutch Gambit, an Allied attack on Italy will cause USA war readiness to be reduced (about -13%) which will delay their entry and loss of MPP's. The time you buy for France may or may not be worth the cost in the long run. An ambitious Allied player could consider either or both gambits, with the double gambit representing the most risk.

A variation of the Italian Gambit is a sneak attack on Libya to take Tobruk. Transport British and Canadian units through Gibraltar, and then transport your Alexandria garrison and fleet the turn prior to invasion. Land at least four units, two on either side, to isolate Tobruk in case it survives the initial attack. Your Carrier in Alexandria and air support op moved from England will help. With luck, this can all be pulled off when Italy's war readiness is around 90-95% and they're about to enter the war anyway. Taking Tobruk early has the distinct advantage of securing Allied control of North Africa and the central Med, thus neutralizing a possible Axis threat in that theater. Taking Tripoli may have to wait until you get HQ support within range, but can be easily accomplished by landings on both sides and bombardments from air and sea. Complete control of Libya early in the game and its 15 MPP's per turn almost makes the delayed USA entry

acceptable. There is risk with this strategy if you take too long and fail to achieve surprise, so be prepared to abort rather than risk losing valuable ground units that you will need later.

Conventional Allied Strategies

For the conservative Allied player, using the time available in the opening turns to mobilize your forces and establish strong defenses is a prudent strategy. The UK is producing about 165 MPP's per turn once Canada enters the war on or after September 10, 1939. France is only producing about 115 MPP's. If Germany attacks into the Low Countries as early as the third turn, the Allies do not have much time to build and deploy much more than they start with. Disbanding units like the UK's Strategic Bomber or France's Air Fleet may provide some quick cash to help buy an HQ or other units, but players should realize how much value is lost during this transaction. Disbanding a unit yields only about 25% of its production cost, and only about 10% for naval units. At a time when Allied MPP's should be conserved with great care, wasting 75-90% of a unit's value is generally bad policy but this is an option for players to consider.

An early threat to the UK's limited MPP's comes from Germany's two U-boats in the Atlantic. These Axis subs can be used as surface raiders in the North Atlantic to disrupt Allied shipping income, and must be in range of either St. John's or Liverpool (generally within seven and five hexes, respectively). Resulting losses will be determined by a random value based on Sub strength in the area as well as potential MPP income from these resources, and could eventually reach about 40 MPP's per turn. Sub naval supply level also affects the resulting convoy losses. Additionally, Axis Subs gain experience from raiding, which makes defeating them later more difficult. Therefore, the Allied player should search for and destroy this U-boat menace early to prevent unnecessary MPP losses and prevent these Subs from returning to port for use later in the war. A massive sweep of the North Atlantic with British and French fleets is usually sufficient, taking care to use Carriers for spotting and leapfrogging of fleets to avoid surprise encounters. Getting to the North American coast early and sweeping northward will usually prevent U-boats from breaking through to the south. If you are careful, it is possible to find and destroy the Axis submarines without taking any losses. If not, you could lose a valuable capital ship, so do not underestimate the threat.

Here are some final thoughts about initial Allied strategy. Keep in mind that the Axis has declared Total War and that their long-term winning strategy will be to invest heavily in technology and build a "Super Army," both in quantity and quality. The Axis can gain an early advantage (especially via technology research and unit experience) and could ultimately make the Allied position unwinnable. The Allied player has to change his way of thinking and how he does battle in order to eventually turn or even stem the tide. Any Allied effort to counteract the Axis strategy is all a part of declaring Total War as well and fighting any way you can to win the game. Things like disbanding and reorganization of units may be tempting to an inexperienced Allied player, but there are some good uses for the starting Allied units and value to keeping them intact for as long as possible. An early attack on the Low Countries and/or Italy may also appear tempting, but are often too risky and could open you up to potential problems in other areas. The basics come down to picking your fights as the Allies and when you do, fight tooth and nail while at the same time trying to limit your losses. Make the Axis pay every step of the way. If done right, you will limit what your Axis opponent can invest in research and limit his

options during the all-important time frame between the fall of France in 1940 and *Barbarossa* in 1941.

France

The Allied player should go into the battle for France pretty much with the understanding that it's going to be a lost cause. You could put everything into it, but too often will still end up losing at a heavy price to the UK due to your extra efforts. For example, losing the Canadian units or risking portions of your Royal Navy fleet could come back to haunt you later on in the war. So the Allied grand strategy should be to make the Axis pay with some casualties while limiting UK involvement and at the same time (if you are lucky) drag out the Battle for France into late summer 1940 or even later.

The key to defending in France is patience and just the right amount of maneuvering of the French Armies to take out at least one Axis unit and perhaps as many as two or three during the Battle of France. This strategy of course assumes you have taken out his U-boats in the Atlantic and that he has taken his time by going with Poland, at least Denmark and then the Low Countries. Also, FOW is key. Make sure not to move your Allied ground units in the Med to keep Italy out of the war as long as possible. Then proceed to move the French Air Fleet to England - before the fall of France, to later become Free French if you are playing with that option on. (Alternatively, the French Air Fleet could be op moved to Malta where it can also become Free French plus be just as effective there as an unsupported British Air Fleet.) Switch the Maginot Line units with Corps, and move the Armies with a few additional Army purchases to a new front line across Paris - back away from the border. More often than not the key Maginot hex is the northern one, so replace the Army there with a Corps on the first Allied turn to get entrenchment as high as possible before the Axis attack and then replace the other two as you build more Corps. Those Maginot fortresses are more or less just to prevent a direct route to Paris, and they serve their purpose as such by forcing the Axis player to go around them and along the coast. If the Axis player decides to attack the Maginot Line then that's the better for you and the longer the battle in France, which is usually a good thing.

Should France build an HQ or Tank Group? An HQ can provide its command rating to marginally improve the French defense, but is not likely to gain much positive experience to provide an additional combat morale bonus. The MPP's you pay for an HQ can often be better spent building more ground units, because maintaining a cohesive defensive line is important. France starts with technology Level 1 in Heavy Tanks. A French armor unit placed in Paris, where it can entrench and be fully supplied, is tougher than anything else in the Allied arsenal to destroy. It also has an *air defense* value of three. Combined with the city's *air defense* value of two, this defense can often inflict some expensive losses on Germany's Luftwaffe. While an HQ may not be a great investment, a Tank Group can often be useful.

Establishing a defensive line farther back from the Low Countries border can be helpful in many ways. Primarily it limits the German attacks to only two ground hexes per French Army, keeps your French Armies close to Paris so they are in good supply, and forces the Germans to attack closer to the French supply source and farther away from his. (Brussels will only be at Level 5 once the Low Countries surrender, which may affect the readiness and Action Points of his lead

units.) What it also does during FOW is it may give him a good surprise here and there, and works very well if the Germans rush into the trap. If France can take out a Tank Group (325 MPP's) or Army (250 MPP's) and delay the German timetable, it's a successful defense. If the German units venture too far and not in force, you can surround his units on three or four sides and possibly destroy them that way. If they venture too far off along the coast, you can hammer them with your French ground troops, the air units in the UK and portions of the fleet located next to Brest.

Continued patience will be needed here, to balance out when to strike back and when to sit tight and hold the line. By keeping your air units initially out of his range, there is a good chance you can hide them (chances are he won't suspect they are around) and even move in your Carriers at maximum range. Together with a good strike from your British RAF, Strategic Bomber, French ground units and French naval units for shore bombardment (better to risk these than your Royal Navy), it may be possible to take out one or two German units in the north. If the Germans force the situation in the south then make a timely retreat from the Maginot Line. Swinging French units southwards and towards Paris while maintaining any part of the Maginot helps. Regardless, at some point he will have to move along the northern portions of France, where the Axis armies may be too far out of supply and ripe for the picking once again.

While fighting is going on in the Low Countries and northern France, consider putting a Canadian or British unit in Brest and possibly Bordeaux before the fall of France and allow them to entrench. Brest can only be attacked by one ground hex and allows UK to gain MMP's for the city and port while denying them to Germany. It can't be held for long against a determined attacker, but it can be a real nuisance for a few turns. Occupying Bordeaux is riskier but it could possibly be held for a turn after France surrenders. You can then evacuate your garrison and force the Germans to take control.

If done right and with a bit of luck, the Allied player can give his Axis opponent a bit of a bloody nose. You may even delay his conquest of France, which can be very important as he will be forced to replace his losses instead of spending MPP's on research and that should give him less of a head start in the all important technology race. Whether to fight forward or establish a defensive line farther back is all kind of a toss up, and something the Allied player has to consider. If you throw everything into France you may just delay Germany enough to prevent adequate preparation for *Barbarossa*. But the risk is that you will have committed too many UK resources too early and have nothing left for a long time to pose any effective threat on the western front or in the Mediterranean. If on the other hand you fight an effective delaying action in France with minimal UK involvement, then you will have a considerable number of MPP's to make some key purchases and to invest in research during the critical period from the Fall of France to the start of *Barbarossa*. If done just right then it's more than possible to threaten the Axis from the west (instead of being mostly on the defensive) and just in time to help turn the tide in the east against the Germans.

France will eventually fall but before it does, if there are any remaining French naval units then consider using them to attack the port at Antwerp. This is useful since the German Luftflottes may be less likely to spend their time attacking your French naval units while the Battle for France rages on, or if they do then they're not supporting the attacks toward Paris and that's also good. If you can manage to knock the port down to below five, Germany will not be able to

transport any units over from there for an amphibious assault of England. Right before France falls, station the bulk of your British Royal Navy next to Brest and move your Allied air units over to western England as well. Your naval units will be in good supply from the previous turn and will enable you to immediately hammer Brest as soon as it becomes Axis-controlled. Start with the port and make sure you reduce it to zero, and then hit the city with whatever is left.

With the UK's Strategic Bomber located right below Liverpool you can reach both Antwerp and Brest. If you reduce both of these ports to zero, then that is at least five turns before the Axis can mount a seaborne invasion from those positions - forcing him to use either Arcachon in southern France or Kiel. This delay alone can often save England from amphibious assault, and may be worth the possible loss of French fleets and some damage to your air units. Once these objectives are achieved, withdraw your navy and air force and sit tight to see what your opponent does next. Make sure you have enough of your navy to guard against an eastern and/or western amphibious assault against England should there still be one. Make sure your RAF Air Fleets are out of intercept range of London for now to prevent unnecessary and expensive losses. All the Axis can do is hit London without any immediate fear from interception, but it usually costs him more than you since that defending Corps in London is at entrenchment Level 6.

France surrenders once Paris is captured regardless of available French forces remaining. When France surrenders and Vichy is created, all non-French Allied units (i.e., British or Canadian) on Vichy territory will be lost. So, don't leave units in Vichy territory during the final stage of the Battle of France, and that includes Syria and Algeria.

With the Free French option on, all French units located within territories initially controlled by the UK will automatically become a Free French unit under UK control. French units in Canada, for example, disband upon the surrender of France. French naval units also have a 20% chance of becoming Free French regardless of current map position. While it is possible to position some units to become Free French (e.g., the Algerian Corps to Gibraltar or the Syrian Corps to Egypt), excessive evacuation of the French mainland to England will only hand the Axis a quick victory in France. He may never be able to take England, but with that early MPP bonus he can really make you pay by the time he decides to attack the USSR. And have enough left over to counteract any early amphibious assaults on the French mainland even with the extra Free French units.

United Kingdom

At this point, you can only hope that things have gone well in the Battle for France. You may have given your opponent a bit of a bloody nose, delayed the victory a bit and reduced his two nearest ports enough to stave off an immediate amphibious assault on England, but you are still not sure. You should have a fair amount of MPP's despite the early purchase of an HQ (preferably Montgomery) for the Battle of France, yet it's still a good idea is to sit tight and avoid research investments for now. Unless your situation is very good, invest in another Air Fleet or Strategic Bomber if possible and make sure you have enough Corps just in case of an invasion. Remember that defense of England is your highest priority. Until it is clear that Axis strategy is focused elsewhere, assume that a *Sealion* invasion is possible and be prepared to defeat it. Although the Axis AI in the game won't do this until USSR has been conquered, a human Axis

player very well might. (It's a good idea to practice sound strategy even against the computer AI opponent, to prevent developing bad habits that may later prove disastrous in games against human opponents.)

With your Strategic Bomber positioned just below Liverpool, you can still hit the Axis ports and spot an invasion force from any direction unless it comes from the extreme north. In that case, a decent naval contingent stationed at Scapa Flow should be adequate. Watch the Intelligence Reports; you can often detect an imminent invasion by seeing a large increase in your opponent's naval strength. If you suddenly see an invasion flotilla, move all your Corps units down along the coastline around London to deny him a place to land (because denying them London is important to limit their supply). Then move in your air units to make sure they are in a defensive range of the Corps and station your navy in striking distance. Don't commit them just yet in case this is all just a bluff, but rather sit and watch what happens. On his next turn the Axis player has either got to hit your Corps units with his air or retreat from the assault. If he goes for your Corps, you have about two or three air units defending and the Corps can usually take some losses and not be destroyed. This will eventually be a losing battle but the longer you delay him, the more time is wasted on what could be a fruitless endeavor especially since it may bring in the USSR or USA early as well as deny him time to sit back and invest in tech.

An optional strategy is to wait out of range from London with your air, garrison Manchester, Edinburgh and the mountain hexes south of Manchester and allow him to land. This too requires a bit of patience and knowing the right time to strike back, with some skill and a bit of luck it can cause the early entries of the USA or USSR as desired. If things go really well, hit the London port with your Strategic Bomber and he won't have any way to escape once the port strength is less than five. Then you can wipe out his landed units in England and, if successful, it should be a short war.

If an invasion appears unlikely, then the UK could attack Ireland. Either go for it right away so you gain the most from its one city at the cost of slightly reduced war readiness of the USA, or just wait until after the USA is in the war. This is a good way to get experience for your Carriers, air units and HQ, plus grab some easy plunder and western airbases to cover your Atlantic shipping lanes. You will have to land a Corps to occupy Dublin and it won't be able to leave since there is no port, but this unit can either be left as a garrison force or disbanded for partial value after Ireland surrenders. Some players are more aggressive and attack Ireland in the opening moves of the game. Early plunder can be used to buy a couple of research points that will hopefully yield some quick advances for air superiority. This early attack strategy is risky and could leave England under-defended if invaded, but could pay off in the long run.

Sometimes it just comes down to distracting your Axis opponent and delaying his victories in the early years while limiting your own risk. If the Axis gains a large tech advantage then it may all be lost, but delaying his tech advances and preventing easy walkovers here and there can limit the massive Air Fleet strategy that some Allied players have seen. There are many examples and variants, but one is for Norway. Some Axis players may go for Norway before for attacking France first, as was done historically, while other players may attack France first and then go for Norway. Whichever way this happens, a good counter-measure is to anticipate an Axis invasion and set up a counter-move in the waiting.

Set up a transport to immediately land a Corps or an Army in Bergen should Norway fall on the first turn, as this will deny the Axis player the port and city on their next turn even if they have a transport ready or if they are prepared to operate a unit in there. You will only have a single turn to do this, so you must be ready. A naval screen should protect the transport, and the screen is there to let you know if he plans on dropping off a unit himself. If he decides to commit in force with U-boats and Cruisers of his own, there is a good chance of a naval exchange that should cost him more than you with the addition of your bomber and fighters with an HQ located around Scapa Flow. If you succeed in occupying Bergen, Germany will have to attack over mountains to force you out, while you collect about 10 MPP's per turn.

This is a good way to irritate the Axis for a while, but you risk losing whatever unit you have sent if the port is bombed and you cannot withdraw. Unit losses will generally exceed the value of Bergen, so you will have to decide if it's worth the cost. If Bergen can be held, it can be reinforced and later used as a base to liberate Norway. If things go bad, you can always pull back and retreat after stealing a few resource MPP's and a little distraction. Part of his distraction may be to fight it out in Norway and this costs the Axis time and money (such as the transfer costs of sending his air units north or the repair costs to his own navy). Either way, these all add up and can cost him more in the long run despite some UK losses. The main argument for doing this is if he is not 100% prepared for war in Russia when it starts later then the UK sacrifices now can often be well worth it.

The Mediterranean

The Med will take on greater importance after Italy enters the war and France falls, and the key will be hanging on to it until you can build the area up. Some interesting strategies include the taking of Iraq by both the Axis and Allied sides. For the Allies it can greatly increase your income and once the USSR is involved all connected Allied resources to Moscow will go up to a full ten in strength, or at least eight for occupied territory. For the Axis, just controlling the Middle East to deny it to the Allies is sometimes important enough.

The initial situation is tricky since the Allies start very weak as they did historically, and in fact the Italians marched on Egypt in 1940 with a 10:1 ratio in their favor but still managed to have defeat snatched from the jaws of victory. Something that involves a bit of risk depending on your Battle for France and defense of England tactics is to send the Canadian army down to Alexandria as well as move the Valiant Battleship from Gibraltar to Alexandria to bolster the naval defenses. Understand that abandoning Allied positions in the Med may cause Italy to enter the war early, as previously discussed for the Italian Gambit. Lesson learned here is for the Allied player to understand the risk of moving your Med garrisons too early and how that may affect other things. If you're not prepared to ram the Italian fleet in the Med or defend against an Axis attack through southern France, then don't move your units to activate the Italians early. Once Italy joins the war, then move the French Syrian Corps to Egypt and the Algerian Corps to Gibraltar - better for them to fight on as Free French if you're using that option than to surrender.

After the dust clears with the entry of Italy, use the Malta Air Fleet for spotting Italian activity in the central Med. Until the Axis actually has air cover in southern Italy or Libya, the Allied player may still be free to sneak transports through the Med, moving from the Malta air umbrella to

escorts waiting near Crete. Just keep out of the two-hex spotting range of any coastal observers and beware of the Italian Sub in an ambush position. Use FOW to keep the Axis player guessing about the Malta garrison until he moves a German Luftflotte within range or is able to buy an Italian air unit. Once Malta becomes vulnerable to air attack and expensive reinforcement costs, consider moving the air unit and replacing it with a Corps or Army. You don't want to do this too early since if you operate your air away from Malta you abandon a key position in the Med and Italian readiness increases randomly by about 4-5% per turn, so just wait. A Canadian unit works very well on Malta since you can use its strength to maximum advantage. One could be pre-positioned in the port ready to move in when Italy enters the war. But, if you decide to move that Air Fleet out of Malta then you give up a very strong presence in the central Med and open up the Maltese waters for surface raiding by Axis subs, so there's an argument for keeping an air unit on Malta.

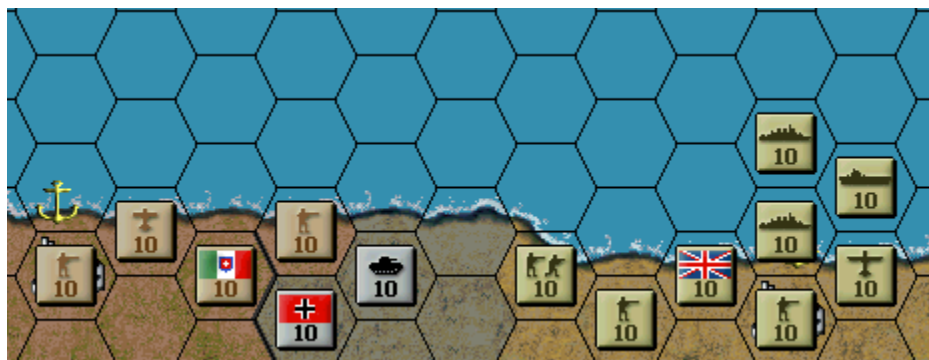
By the time Italy tries to take on Alexandria you should be well entrenched and able to make things very difficult for them. You may lose the bulk of your navy but if you can delay the Italians or even waste their time there then the better it is in the long run. Keeping your Carrier in port is key as the port provides additional naval defense and your Carrier aircraft help defend against air attacks on Allied positions in Egypt. With at least two units stationed in and west of Alexandria it should allow you to hold up the Axis long enough to reinforce the area with an HQ and other units, and also protect your Carrier from ground attack while it's in port. Air support will be very important. An additional Air Fleet and/or your Strategic Bomber are crucial for spotting Italian naval activity in the eastern Med and harassing their fleet. Without air cover, you will very likely lose most of your fleet and eventually lose Egypt.

The earlier discussion about Axis strategy for taking Egypt should be fully understood by the Allied defender. A determined Axis attack on Egypt, including massive air and naval support, can often succeed or at the very least cripple the UK's position there. It is very possible for your ground and naval units become trapped and butchered one by one, taking losses faster than they can be reinforced or replaced via the South Atlantic/Suez Canal transport loop. Only your air units can escape destruction via op move. Remember that Egypt is only worth 15 MPP's per turn and its loss does not mean the end of the game. Be prepared to fight to delay the Axis and make them pay for each advance, because any delay here is a distraction from the main fight in Russia and may help in the long run. You could consider moving all or most of your fleet west to Malta and Gibraltar before Italy enters the war when you have the chance so you don't risk their loss later. Transports to Suez with additional ground units could pause near Gibraltar waiting to see what the Axis does before committing them on a one-way journey. The bottom line is that North Africa could end in disaster for the Allies, but the game does not have to. Limit your losses and maintain the ability to fight on until the USA arrives.

Assuming that the defense of Egypt is assured, Allied strategy needs to consider Libya and Iraq. One can either secure Tobruk first and then Iraq, or vice versa. Go for Iraq first. Many players feel that it is THE key to Allied victory in the Med - the valuable Iraqi oil resources plus the fact you'll have a land connection to Moscow will yield great results. Declaring war on Iraq only reduces the USA entry by about 10% and delays its entry by about three turns but is usually worth it. Plunder plus 40 MPP's per turn initially, then 64 MPP's once USSR enters the war and the road to Moscow opens, provides the UK with the additional production it needs to fund

offensive operations. Also, MPP's for Egypt and later Libya will be greater, plus your battered fleets can be reinforced back to full strength before taking on the Italians.

Taking Iraq is not particularly difficult. It simply takes time to accumulate and deploy enough forces to defeat the single Corps in Baghdad. Supply is the biggest problem. Without an HQ, a couple of units can seize the oil fields but won't be able to take Baghdad. Even with an HQ, without HQ linking across the Suez it will be out of supply and its HQ supply limited to only five, reducing the readiness of supported units. Therefore, surrounding the capital will be necessary unless you have multiple HQ's and/or massive air support. One option is to declare war early and seize the oil fields, and the French Syrian Corps can help do this. The other option is to wait until after the threat of a *Sealion* invasion has passed before declaring war and you've had time to move units to Egypt. You'll eventually need an HQ, an air unit or two and enough additional ground units to be able to surround the capital. This includes possibly moving the HQ and air units adjacent to the capital, which means several turns to get that HQ across the desert. Now the Baghdad Corps will be unable to reinforce stronger than five, and can then be reduced and eliminated. If you do use French units in an early invasion it's a good idea to let the British units move across the oil wells and occupy Baghdad, as the country becomes a French colony with France (and later Vichy France) receiving the MPP's if you don't. With Iraq secured and all those extra MPP's rolling in to the UK's treasury, you are now better prepared to fight the Italians.



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Conquering Libya is basically the same three-step process the Axis use for taking Egypt, only in reverse. First, gain air superiority and defeat the Axis forces in Egypt. Second, advance to Tobruk and neutralize the Italian navy with combined air and naval attacks. Third, isolate Tobruk with landings to the west if possible and pound it from the east with repeated air and ground attacks. If the Axis pushed east far enough and you are limited to attacking from a single hex against an entrenched defender with HQ support, then that first step may take some time. German U-boats operating out of Athens can harass your fleets and transports during the second and third steps. Once Tobruk falls, taking Tripoli is easy by comparison. Move your air units (supported by an HQ) to within range, make landings on either side of the city, and pound it into submission. If another Italian unit is adjacent to the Tripoli and prevents its isolation, meaning both units can be reinforced up to eight each turn, then focus on destroying the one outside the city first. Air and naval bombardment will help, and you should have force superiority in the central Med at this point to be able to do this.

Other Considerations - The Balkans, Spain, Turkey

The Allied player can expect a coup in Yugoslavia on or after March 26, 1941, but there's not much you can do to take advantage of it. You should also expect an Axis attack on Greece as early as late 1940, and here you may have some options. An overland attack across the mountains will take time and allow the UK to intervene. Transports can reach Athens from Alexandria in a single move. A couple of British units with HQ support can occupy the mountains north of Athens and put up a good defense. Beware that Axis air support can damage the port and prevent you from leaving, so understand that this strategy could become a trap. Also, those same mountains that make an Axis attack in so difficult will also hinder any Allied attack out, so be careful of overextending your units too far north and choking their supply. An Axis seaborne invasion is more likely to succeed in taking Athens and preventing any intervention, so watch the Intelligence Reports for increases in Axis naval transports. It may be possible to catch Axis naval escorts in the open and destroy one or two, anything to shift the balance of power in the Med in your favor. Beware of that Italian Sub that you may encounter by surprise, and long-range Luftwaffe support that could help the Italian fleet counter-attack and shift that balance of power against you.

If the Axis attacks Spain, you will have about four or five turns before Gibraltar is threatened. Do not move the garrison. It is important to maintain the maximum entrenchment level of the fortress and delay its fall for as long as possible. If Gibraltar falls, your Royal Navy in the Med will be trapped and unable to leave or be reinforced with additional fleets. Depending on the situation in the central Med, it may be possible to withdraw your fleets but you risk fighting a losing battle trying to break out. Sitting tight and preparing to defend Egypt and the eastern Med is probably a better course of action. Moving additional units to Spain to intervene will usually be a case of too little too late. You can't use the port at Gibraltar without moving the garrison, so that delays unloading transports and provides no way to withdraw damaged units before they're destroyed. One trick you should consider is moving a British unit to land in Tangiers, if you already have a transport in the Atlantic able to arrive within two or three turns. At least when Spain surrenders you'll have something and it will be difficult for the Axis to destroy a garrison there, which can provide spotting of Axis activity past Gibraltar if nothing else. Alternatively, the Gibraltar Corps could be withdrawn when it's damaged rather than reinforce it. Transport and unload it in Tangiers, if the Axis isn't already landing there to occupy a vacant city or op moving an air unit in to hold it. Axis declaration of war on Spain does significantly increase the war readiness of the USA by about +20%, so hopefully their early entry by about five or six turns will help offset the loss of Spain and Gibraltar.

If the Axis attacks Turkey, it will generally bring USSR into the war immediately or very soon thereafter since USSR war readiness is significantly increased by about +34%. An early attack prior to declaring war on USSR will probably leave the Axis ill-prepared to launch a devastating invasion of Russia, but a later attack in conjunction with a well-prepared invasion could seriously threaten your vital Allied rear areas - Iraq and the Caucasus. It is important to op move Allied units to Ankara to establish a rugged defense and delay the fall of Turkey for as long as possible while you prepare other defenses in depth. Send a Soviet unit to Erzurum to garrison that city and delay the Axis advance into the Caucasus. The UK may or may not have taken Iraq by the time Turkey is attacked and surrenders. If you have taken Iraq and can afford to send British units to help defend Ankara, then do so. If you have not taken Iraq and cannot

immediately attack Iraq to at least seize the oil fields prior to Turkey surrendering, then do not declare war on Iraq and allow Axis units to be moved into Baghdad. Better to let the Axis declare war (which increases USA war readiness by about +18%) and then move in your own reaction force. Bottom line for Turkey is to use the mountains and supply challenges to your advantage to delay its surrender, and the subsequent Axis advance into Iraq and the Caucasus.

Barbarossa

The eventual battle with the USSR is the critical point for the Axis, and everything up to this point is only a prelude to the main attraction. If the Allies have been successful picking their fights between the fall of France and *Barbarossa*, Axis options may have been limited somewhat. Either the Axis has adequately prepared for this challenging campaign in terms of force structure, technology advances through research, and unit experience gained in previous campaigns, or not. The earlier detailed discussions about Axis strategy in Russia should be fully understood by the Allied defender, because understanding your opponent and his goals is necessary to delay his advances and hopefully turn the tide.

Unlike your other battles in Western Europe, Russia is the only place where you can trade space for time and that approach seems to have served the Russians well through several centuries of warfare. From the Allied viewpoint, you need to fall back and preserve your resources for the day when you can get leadership and mount a local counter-offensive. Put up a token defense of cities and resource centers along the border and eventually make a stand somewhere in the east. Your initial goal should be simple survival. Time is on your side only if you survive in Russia and the western Allies succeed in opening a second front to help relieve Axis pressure.

Even if USSR war readiness increases to the point of allowing you to declare war first and possibly attacking into Poland, be very cautious about launching an early offensive. Unless an opportunity presents itself to capture a city (like Germany is still bogged down in France or is fighting a prolonged battle in England), it's a good idea not to overextend your army. USSR starts with no HQ's, so you really do not have the leadership support or supply benefits you need to sustain an offensive drive into Germany if they have adequate reserves to defend Poland. It may be best to use the time available to you to withdraw your frontier garrisons to a better defensive line and prepare the Red Army for either a successful offensive into Germany or an eventual Axis invasion into Russia.

Surviving the Blitzkrieg

The key to the defense of Russia is establishing a second defensive line, back along the Smolensk-Kharkov line. The best you can hope for the first line (the one on the border) is to save some of your Armies. But don't sweat it if you don't. Fall back from the original positions, moving whatever tattered remnants remain back to defend cities like Moscow and Rostov. Continue to defend your forward cities and perhaps add an additional Corps or two behind them to help delay their fall. By defending behind your cities and using terrain to your benefit, you help prevent their isolation and maximize your ability to reinforce the garrisons, while lead Axis units are forced to attack at reduced supply and readiness to destroy these pockets of resistance. Do not waste your Guard Tank Groups in these early battles. Move them back and conserve

them for later use. Same with your surviving Air Fleets; don't lose them (even if it means you don't use them).

One defensive philosophy for your second line is to build it with newly purchased Corps only - no Armies, no armor, no HQ's, and no air. Your HQ's for now are your cities, and although some players like to purchase an HQ or two their cost is better spent on units needed for a cohesive defense. It is critical to have an Army garrison in Leningrad and Moscow, and the sooner the better since you want them entrenched as much as possible for later. Also, Corps garrisons for Smolensk, Kharkov, and your three mines near them should be established as a first priority to get them entrenched as much as possible before they're hit. You need to take advantage of the terrain - rivers, marshes, and forests - because you won't have enough Corps to make a continuous north-south line. But that should be your goal, starting in the south behind the Donets River (to protect your valuable mines and the approaches to the Caucasus) and working your way northward toward Leningrad. A good Axis player will be able to punch through, so you'll also need some backup units behind Smolensk and Kharkov to plug gaps and reestablish the line as necessary.

An alternative defensive philosophy is to also purchase some Armies and HQ's rather than building large numbers of Corps that just give target practice experience to the Axis army. Armies are only a little more expensive than Corps but they are a lot more powerful. And, just as HQ's are essential for the Germans, HQ's are just as vital to the Soviets. Set up a single line of Armies supported by HQ's on good defensive lines, and try to withdraw or op move them out before being destroyed or cut off. Build Corps when you have to plug essential holes. When the initiative finally goes over to the Soviets, the surviving and more powerful Armies are then better suited than Corps for going on the offensive.

Another alternative defensive philosophy is to start with a rather weak defensive line just to slow the Axis down. While he's working on that, try to build clusters of units around each city. Build these defended clusters in the better terrain, like forests and behind rivers. All of these should be built as soon as possible and left alone to gain entrenchment bonuses. These clusters are a pain to conquer, and your opponent will have a hard time deciding which way to go because most area is empty ground. And he won't know where your armies are. Defending in clusters forces the Axis player to concentrate his attack in one location for a longer period of time, possibly allowing you to maneuver around him. Spreading your units along a long line eats up a lot of units to make that long line and your opponent only needs a few planes to be able to punch a hole in any given spot in one single turn. And whereas only two units can attack any one unit in the straight defensive line, they can still be taken out one by one. The cluster defense may be a viable option against some Axis opponents but it has weakness. The Axis strength is in surrounding, isolating, and totally eliminating enemy units. The cluster defense simply rolls out the red carpet for that type of Axis tactic. Besides, if you have enough units to create sizeable clusters around every city then you probably have enough units to make an effective defensive line.

Counter-attacking the experienced German Wehrmacht too early is usually a very bad idea. You might destroy a unit or two, but you will leave yourself open to further attacks in a weakened state. That's the major mistake some inexperienced Allied players make, trying to employ offensive tactics too soon rather than preparing for the major defensive battles to come. Do not

worry about offensive units like Tank Groups and Air Fleets, at least not for a while. Besides, tanks and aircraft are simply too expensive and too inefficient to make good defensive units, which are what you really need right now. Remember, time is on your side. All you need to do is out-produce the Axis player, and after a year or two you may have an obscene amount of troops to play with, numbers the Axis can't match. You can build two to four Corps each turn depending on how much you have to reinforce unit losses, and the Germans can't keep up with the reinforcements. Keep pumping out Corps to stiffen your defensive line. Beware that the Germans can outmaneuver you, so don't let them do it. Block their paths where possible and force them to attack and take some losses.

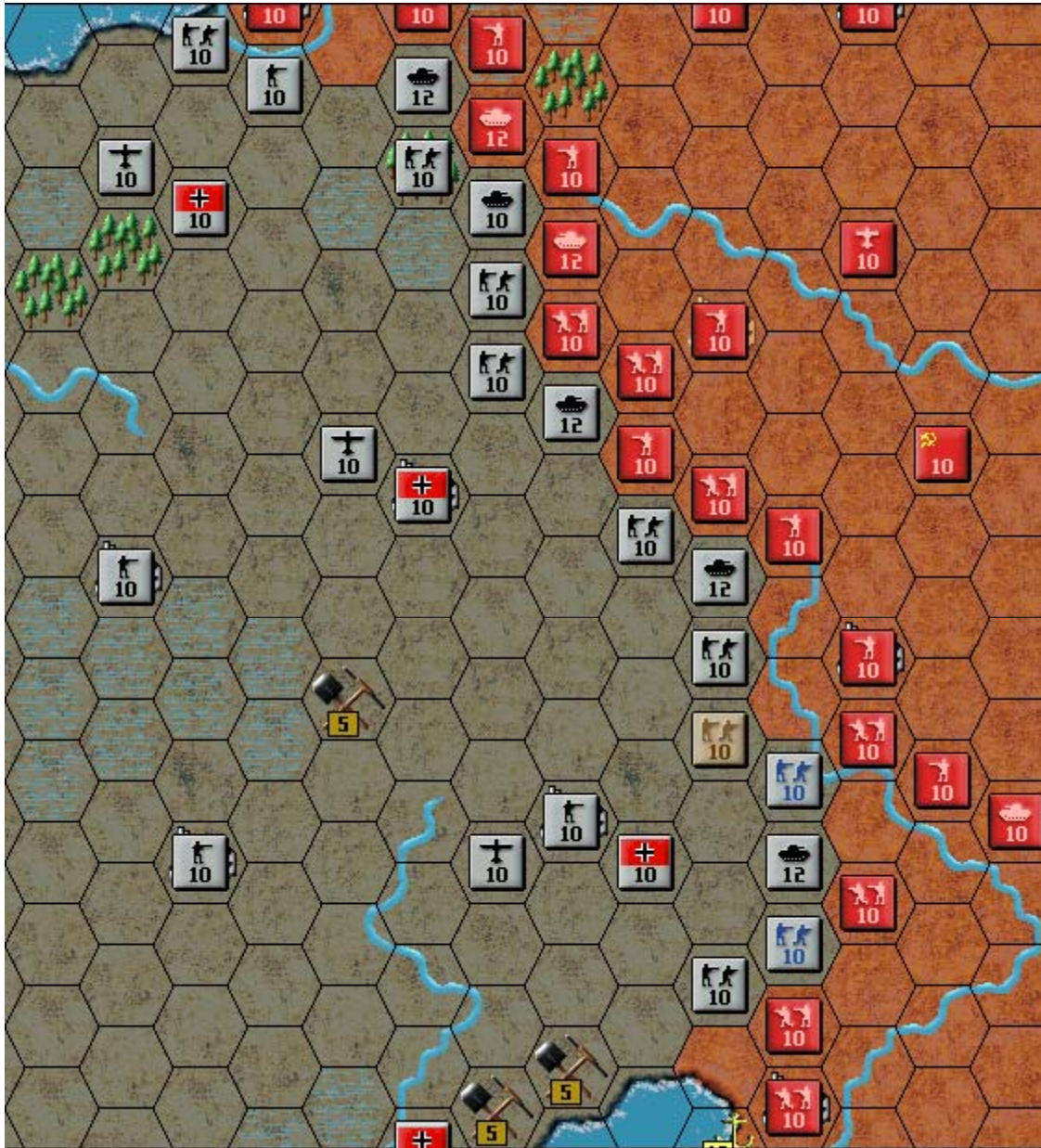
An interesting strategy for an early offensive is to attack Finland as soon as it enters the war. Unlike the Germans, the Finns have no experience, no HQ support, and are poorly supplied. The Finns usually enter at the end of the Axis invasion turn or the turn after. So the Soviets may have a chance to make a quick attack before the Axis player is able to do anything. The Air Fleets and Tank Groups withdrawn from the frontier can be moved to the Leningrad area. Building an HQ provides useful support. Transporting the Leningrad garrison to Helsinki may allow a surprise invasion to cut off the Finnish border units from their capital and permit an early attack on the Helsinki garrison to knock its strength down to eight or less. With everything in place, it's relatively easy to destroy the Finnish units on the border in the first couple of turns and advance on Helsinki before the Germans have a chance to reinforce it - unless they're prepared to do so from the start. If Helsinki can be surrounded with three units supported by a HQ, it can be taken in one or two turns. This can succeed in knocking out an Axis minor ally early in the war, securing your northern flank, and providing enough plunder to make taking this risk worthwhile. This strategy has its risks, however, because the German fleet can interfere with Soviet landings and protect Axis transports moving to reinforce Helsinki. But even if Helsinki holds, it should be possible to at least destroy two or three Finnish units and perhaps achieve a better defensive situation in the north for a while.

In summary, to survive the initial blitzkrieg you must hold on to your forward cities for as long as possible while you build a second defensive line behind the Donets River. Protect Smolensk and Kharkov and your three mines. Even after the Riga-Minsk-Kiev-Odessa (RMKO) line falls, you will still be producing about 430 MPP's per turn until you start to lose your valuable mine resources. This level of production is sufficient to hold a cohesive defense together for several turns, at least until the initial effects of Scorched Earth wear off and your Axis opponent catches his breath for his drive deeper into the Russian Motherland.

Defending the Motherland

Even as you are building and defending your second defensive line, early preparations should be made for your third defensive line. This main defensive line stretches from Leningrad and Moscow in the north to Stalingrad and Rostov in the south, and primarily uses the Don River as an obstacle. Leningrad, Moscow and Rostov should be garrisoned early with Armies that survived the initial attacks and allowed to fully entrench. Be sure to also defend the hex north of Leningrad for as long as possible, because once Leningrad is completely surrounded it is likely to fall without too many struggles. Armies in Stalingrad and Voronezh could be considered, but at least garrison them with Corps and allow them to dig in. If Turkey has not been attacked, move your Caucasus Corps north to defend the Kerch crossing southwest of Rostov. The forest and

marsh hexes between Moscow and Leningrad should be defended. The idea is to establish defenses at all these key locations early and give them time to dig in. Your second defensive line will eventually fail and you will have to fall back. You should have that third line started to permit an orderly retreat and establishment of your main defensive line.



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Knowing that your second defensive line will eventually fail is one thing, but knowing how and when to break contact is another. If you simply retreat your damaged units a couple of hexes, the pursuing Axis units will attack and destroy them. You must either reinforce to full strength if possible, or move or op move them back toward your third line. One technique is to leave your city garrisons to their fate. They will buy you time for other units to establish your new defense line while the Axis units surround the cities and assault them. Another technique is to abandon

your cities and save your units. Except for perhaps the three core cities (Moscow, Sverdlovsk, and Stalingrad), no other city is worth losing an entire unit.

When should you retreat from the second defensive line? When it becomes clear that you will lose more than you gain by staying, and here you have to be thinking MPP's. Think about the cost of reinforcing your losses versus the possible cost of rebuilding destroyed units. Once your line is breached and you've lost the temporary benefits of terrain and a cohesive line, then it's time to cut and run. In some cases, like the western mine nearest Sevastopol that's exposed to attack from three hexes, it's time to retreat that unit when its reinforcement costs exceed the 30 MPP's per turn that you're receiving for that mine you're defending. It's all about MPP's. When your defense fails to work for you and you start taking more losses than you can afford to replace, it's time to get back to the Don River line (and back to the upper Volga River line north of Moscow). At least there you can minimize your losses while the Axis attackers are faced with supply problems (at least until Smolensk and Kharkov are secured and back up to strength five) plus the 50% reduction in offensive power when attacking from a river hex.

Moving back to a main defensive line behind the Don River does several things for you besides offering a better defensive situation. It buys you some more time for important research advances to kick in, like Anti-Tank Weapons. It probably triggers Siberian transfer as the Axis pursuit brings units closer to Moscow and Stalingrad. And it further lengthens Axis supply lines that become vulnerable to your partisan activities. So it is vitally important that the Allied player understand the benefits of making a strategic retreat at the optimum moment. If you abandon your second defensive line too soon or without a sufficient fight to inflict some losses on your opponent, then you are not fighting Total War to make the Axis pay every step of the way. If you continue to fight forward too long, you risk exhausting your limited defenders and leaving your main defensive line unable to withstand the coming assault. So there's an optimum moment in here that players should learn to recognize and take advantage of. Also consider bringing in British reinforcements via Iraq to help defend USSR. This often helps strengthen the overall Allied position when they need it most.

All this time, your Guards Tank Groups and Red Air Fleets should be well away from the front so they cannot be spotted or drawn into early battles to suffer unnecessary and expensive losses. Hopefully your air units will receive a technology advance or two so they can at least be competitive with the German Luftwaffe. Once your Siberian transfer occurs and you receive an HQ or two, plus additional tanks and air units, your counter-attack force should be complete. The main tactic here is to build up a massive counter-attack force somewhere safe behind the Don River, and don't let the Axis know where it is until you're prepared to commit it to your defense. An important lesson of Sun-Tzu (a famous Chinese military strategist) is applicable here: never let the enemy know your strength.

When you are finally ready for a counter-offensive, then think about purchasing Armies (and maybe even Tank Groups, if you are doing really well). Alternatively, some players try to research Heavy Tanks from the start and buy a couple of additional Tank Groups - get them while they're cheap and keep them alive long enough to get upgraded later. Again, the idea is to slowly build up a counter-attack force even while you are building and defending your second and third defensive lines.

Continue to harass your Axis opponent where possible and even trick him as you draw him deeper into your territory. It is very important for your defenders to neutralize the Axis advantage of maneuver and mobility. Perhaps leave "fake" defensive lines in place (made up of cheap Corps and weak units) just to slow him down and confuse him more. Do not allow the Axis to outflank and encircle your units or cities. Use FOW to your advantage. An example here is that the Axis may not see all your units, but does see the front line move (i.e., the color change of hexes) when you move your units. So consider sending units into his controlled (gray) territory occasionally and then retreat them back, just to create some confusion. Do this a lot especially before you attack for real, otherwise he will see you coming much too early. This is more effective when the front is dynamic, and less so as the lines become more static. The more confused he is, the more likely it is that he won't have a clear strategic response.

Hopefully by the winter of 1942-43, the Soviets are successfully defending along the Don and Volga Rivers and have a solid counter-attack force ready and coiled to strike. Timing is everything. Watch for your partisans to periodically appear, but most likely during the winter months when there's a 75% chance for activity. Move the partisans if possible to take control of occupied territory and cut off captured resources from Berlin, reducing their maximum strength value from five to three. Also watch for the supply penalty of any captured Soviet resource within six hexes when they first appear. Be prepared to strike in conjunction with your partisans appearing and Axis unit readiness reduced due to behind the line supply disruptions. This is when the lead German units are most vulnerable and your counter-attack most likely to have greatest effect. Also target the Axis minor allies, since they are usually weaker and do not receive any bonuses from HQ's. Or, target Italian units in coordination with British and American attacks in the Med. Carefully evaluate just how effective your counter-attack is and how much strength you have to sustain it. Until you're stronger and have adequate HQ support, you may have to content yourself with a strike that manages to destroy a few valuable units and then retreat before you overextend yourself. Don't lose your entire offensive capability by wasting it too early.

The ideal situation is one where the Axis main attack force is deep in your territory, facing a weak defensive line and thinking that the Red Army is finished. Then, when the time is ripe, use your built-up counter-attack force to break through. The aim is to trap his main attack force inside your territory, like the German 6th Army at Stalingrad. It's most important to destroy his supply lines - cut off his units and cut off his occupied cities. So use fast Corps to find the less-defended areas, and get your cities and resources back. If you manage that, then head west instead of confronting his main army to the east. Heading west will also cause him to panic. He doesn't know how strong a force you have, so he will have a hard time deciding whether to head back west himself, or continue east, or split his forces.

Regardless of when you strike back, your initial attacks will have to overcome all of the unit experience, HQ command ratings, and HQ combat morale bonuses that the Axis has accumulated. Also, that wonderful Don River defense tends to work both ways. Counter-attacking back across it is a challenge. This will be difficult and perhaps discouraging at first, but only by inflicting losses will you be able to reduce that experience differential. Once the western Allies have opened a second front to draw off some Axis resources (and they need to do this if the USSR is to survive and fight back) then attrition warfare can hopefully kick in to inflict losses on the Axis faster than they can be replaced. Keep hitting back wherever and

whenever you can. Once the forward lines are weakened and broken, breakthroughs to the rear can occur and the Red Army can gain some offensive momentum. Be cautious not to over-extend your lead units too far, or the retreating Germans may counter-attack like they did historically near Kharkov during the summer of 1943 (Operation *Zitadelle*, the German counter-attack at Kursk on July 4, 1943).

If the Axis achieves a breakthrough in your main defensive line, remember there is the three-city supply system in the USSR, where Moscow, Sverdlovsk and Stalingrad can all be central supply areas. This allows you to keep units supplied and reinforced even if cut off from the active capital, but does not allow you to build new units. Keep this in mind. If the Axis break into the Caucasus, build or op move units to defend the resources there and delay the Axis for as long as possible. Once the Caucasus is cut off from the capital, no more Soviet units can be placed there. The only help possible is British units sent via Iraq. Continue to fight and hold out for as long as possible. As fighting progresses toward the Urals and it becomes clear that surrender is inevitable and the tide in the east will not likely turn, some units such as Air Fleets and excess HQ's could be disbanded for more useful Corps and Armies to help defend the Ural mountains and Sverdlovsk to the bitter end. Research points can also be reclaimed to help build or reinforce Corps and Armies. Until the USSR actually surrenders, it is still in the game and able to divert Axis resources away from your western Allies. Who knows, it may still be possible to force a decision in the west and permit a recovery in the east, or at least delay the inevitable for a few more turns.

Fortress Europa

Strategic Bombing

There are not many players who have claimed to win the game due to bombing, but it is a strategy for the Allied player to seriously consider. Here's an example. If the UK chooses to spare its RAF from high losses they can have three Air Fleets, a Strategic Bomber and an HQ in England by the time when the Axis attacks USSR in 1941. If UK has good air technology (Jet Aircraft is most important, but Long-range Aircraft and Heavy Bomber techs are also useful) they can really force the Axis to divert Luftflottes from Russia to Western Europe unless they want to suffer from bombing. In 1941-42 the UK is too weak to threaten France directly with a seaborne invasion, but a bombing campaign may provide the edge that they need. It also gets your HQ and air units experienced enough to be powerful by the time the USA joins the war.

If the Germans have a Luftflotte or two in Western Europe, then UK can bomb (with escorts) resources and force the Axis to spend MPP's reinforcing his air losses. This can be a great help to the Soviets, not to mention keeping some of the Luftwaffe diverted. If the bombing campaign causes the Axis to transfer more air units to France or Norway, then at least he is not using them in Russia and that will slow his advances there. If the Luftwaffe is still too powerful, then the UK should better back off (retreating to northern England or op moving to the Med) to avoid taking excessive losses and being slaughtered. Periodically check the situation with long-range spotting and resume the bombing campaign when the Axis withdraws some of his air units for use in Russia or elsewhere. If the Axis ignores the bombing threat, then the UK will gain experience and the Axis economy will suffer, especially if your bombers are Level 2 or better.

Understand that any capital cities or mines that are totally destroyed will cost the Axis about 16-20 MPP's per turn in lost income and a single bomber is capable of keeping several resources on constantly low values. Also consider the long-term impact. For example, if a bomber reduces a port down from a strength value 10 to 0, this will immediately cost the enemy 10 MPP's, but it will also cost him reduced MPP's from that port until it has been rebuilt to Level 10. That is 10 (immediately) +10+9+8+7+6+5+4+3+2+1 = 65 MPP's! Knock down several resources to low value and you will get your Axis opponent's attention. An Axis counter-strategy to watch for is his investment in Anti-Aircraft Radar to improve the air defense values for all his strategic resources. You will not easily detect his advances in this tech area, but you will notice increasing losses to your bombers. This may cost you, but at least the Axis may divert a research point or two away from other priorities. Additionally, a bombing campaign forces the Axis player to garrison his resources with ground units that could have been used on the eastern front.

The idea is to keep some pressure on the Axis in the west to help the USSR in the east. If the UK takes a passive role while their Soviet allies are desperately fighting the Axis war machine all by themselves, they are likely to find themselves without any Soviet allies later. Remember that at historical high tide in 1942 the Axis production reaches about 690 MPP's per turn compared to Allied production of about 615 MPP's. That differential of about 75 MPP's can be further reduced by an effective bombing campaign, putting an additional strain on the Axis ability to maintain their tenuous economic advantage. And drawing off Axis ground units to garrison resources in the west may be just enough to prevent a successful breakthrough in the east. Anything that can help the Allies tip the balance in their favor at this critical point in the game may make all the difference in the world.

Here Come the Americans

USA war readiness starts increasing after February 2, 1941 at about 3-4 % per turn randomly. For a relatively historical game or one where the Politics option is set for historical entry, the USA should enter around December 7, 1941. This entry date could be earlier based on Axis declarations of war directed against Switzerland, Spain, Vichy France, and/or Sweden, or if a prolonged battle is being fought in England after an Axis *Sealion* attempt. The entry date could be later based on aggressive Allied declarations of war or relatively non-provoking Axis activity. When the USA finally does enter the war, it lacks strength to immediately get involved with any major operations. But it has the ability to grow unimpeded by losses that need to be replaced, at least for a while.

A couple of strategies are available for the USA initially. Start investing in research early to build up a base of four or five points or more. The USA starts with a couple of points already, and at 180 MPP's per turn it will take about five turns to buy another three points. Or, start a balanced program of investments and building units, particularly an HQ if you want your limited army and air force able to do something useful. In either case, research started during the first year is necessary so the Americans will be competitive in the years to come. Of course, all this depends upon whether the USA enters "normally" or under duress (i.e., England under attack and close to surrender or Gibraltar under attack.)

Priority number one for the USA is to determine if the Allies have naval superiority in the Atlantic, since you can not safely go anywhere with your transports if you don't. This all depends

on the state of the British Royal Navy and status of any German U-boats. Be cautious venturing out to sea without your British allies nearby for support, preferably with their Carriers and land-based air providing some spotting. The US Navy may have to consider a shipbuilding program to add a Carrier and/or a Cruiser to the fleet, just to win the Battle of the Atlantic and ensure safe shipping lanes.

Priority number two is to build up the air force. The USA starts with one Air Fleet. It will need at least one other and a supporting HQ before you consider deploying them overseas together. The USA begins with the best starting Air Fleet and Strategic Bomber techs, and units of both types will be needed to fight the Axis. The at-start ground units are usually sufficient for the first year but will also need a supporting HQ to be completely effective. The whole idea during the first year or so is to nurture the American war industry and develop a solid base for the future. It will be up to the Americans to help break Fortress Europa and relieve pressure on the Soviets in the east.

The Road to Rome

By 1942, the British should have Iraq secured and should be well prepared in Egypt to push into Libya if they haven't already. Tobruk and Tripoli need to be secured before Italy can be tackled; Tobruk to provide its port for launching transports and Tripoli to provide air bases within range of Sicily. Taking Sicily first is important because the Allies won't have enough air support within range to make a successful invasion of the Italian mainland. If Malta does not have an air unit on it, air superiority from Libya will be critical and a Carrier should be moved within range to spot activity on Sicily. The UK should have at least two HQ's in Libya in preparation for Operation *Husky* (the Allied seaborne invasion of Sicily on July 10, 1943), one near Tripoli to support the air units and the other near Tobruk ready to embark. A task force from the USA can also be considered, consisting of a few Armies and an HQ as soon as one can be built. The goal for *Husky* is simply to establish air bases on Sicily to support the next step in the Allied strategy - the invasion of the Italian mainland and defeating Italy. Looking ahead at the terrain involved, the Allies will require a couple of HQ's for supply linking from Sicily until a supply source (Bari) is captured. While the UK can probably accomplish this alone, a joint operation with USA participation is usually helpful and it's good to have everything well prepared before launching an invasion too soon.

Historically, the Allies declared war on Vichy France to secure Morocco, Algeria, and Tunisia with Operation *Torch* on November 8, 1942 prior to attacking Sicily. This strategy has the advantage of obtaining an additional air base in Algiers and another port at Mer El Kebir to support *Husky*, plus gaining combat experience for some American units. If the Allies do declare war, British forces should be prepared to secure Syria at the same time. The disadvantage is activation of Vichy France as an Axis minor ally, which provides Germany some additional forces and MPP's. Taking Algeria is not critical. Players can choose to either follow the historical path or simply attack Sicily directly from Libya.

Starting with Sicily, determine if Axis air units are within range and if Palermo is garrisoned. If there are Axis air units nearby, it is important to start contesting the airspace early. Attacking the port with HQ supported air strikes from Libya will usually draw any interceptors in range, identifying them and hopefully inflicting some losses, and this allows your Carrier(s) to move

...surprise if at all possible, and the soc

Once the Allies have North Africa and Sicily, Italy's production drops to about 90 MPP's per turn plus 16-24 for Greece or Yugoslavia. This is sufficient to keep up with reinforcements while

defending the Italian mainland, but not enough to support its units in both Italy and Russia and certainly not enough to rebuild destroyed units. To make this Italian strategy effective, the Allies must work together. Any units moving south toward Sicily can be attacked with air and naval bombardments and killed by your ground units. While its western allies are performing *Husky*, the Soviets should be targeting Italian units and inflicting casualties. Use attrition warfare to destroy Italian units, which then forces Germany to close gaps in the line and hopefully draw off some resources from Russia to help defend Italy. With luck, opening this second front in the Med may be just enough to help turn the tide in Russia in 1942-43.

The next step is to invade the Italian mainland and secure southern Italy - the city of Bari and port of Taranto. Operation *Avalanche* (the Allied invasion of Italy on September 9, 1943) was historically a joint operation with the British attacking from Sicily and the Americans making an amphibious landing west of Bari at Salerno. Multiple Axis defenders will usually make this impractical in the game. What usually works is to advance from Sicily first and grab that two-hex wide portion of the Italian toe, perhaps with amphibious landings, where your units can only be attacked from a single hex. Position an HQ at the crossing hex (Messina Straits) to provide supply. Continue to batter the Axis defenders around Bari while you take time to repair your fleets and air units for the next big offensive. When you're ready, launch a massive attack to isolate Bari - ground attack from the toe, amphibious landings to the west, and perhaps amphibious landings to the north and south. Another HQ should land near Bari and with HQ linking will provide support. Here is where having one British task force and HQ performing one part and the Americans performing the other part can prove useful because shuffling units around is impossible. Anticipate a vigorous Axis counter attack and be prepared to replace destroyed units with reserves that you've built up (i.e., have some ready or enroute; don't wait.) Focus everything on Bari. Once it falls you've secured a supply source for the final push toward Rome.

With southern Italy secured, Italian production drops to about 90 MPP's total per turn. This may still be sufficient for the enemy to keep up with reinforcements while defending the rugged mountains south of Rome. The Allies will usually struggle for several turns to catch their breath here, reinforce losses, move up air support and prepare to attack again. Desperate battles for a single hex here and there will occur, but eventually the Allies should prevail and take the key mountain hex south of Rome. While this is going on, the Allied player should be thinking about whom he wants to actually take Rome. Should the UK or the USA receive the plunder and Italian MPP's? Britain should already have Iraq so it's a good idea to let the USA catch up, otherwise your American allies won't have the resources to sustain themselves in the heavy fighting ahead. Therefore, letting the Americans advance up the west coast while the British advance up the east works well but requires coordination as you rotate units around.

Historically it took about a year of heavy fighting between the invasion of Sicily and the occupation of Rome in June 1944, and that's about what it may take in this game. For the final assault on the capital, seaborne invasions north of Rome on either or both coasts can be considered to help with the assault and block counter-attacks from the north. Pound Rome with everything you've got. If you capture Rome and there are no enemy units adjacent then Italy should surrender immediately. However, if there are enemy units adjacent and several Italian units still in play then don't be surprised to find Italy fighting on for a few more turns. Continue

to press on, and use the time to reoccupy the capital with an American unit if a British unit was first to move in, if that's what you want.

As Italy's surrender becomes imminent, anticipate opportunities to occupy vacant cities when Italian units disappear. Germany will be forced to move units into vacated cities if they have available units nearby, or leave them vulnerable to Allied occupation. Northern Italy, Albania and Greece may all offer opportunities for units waiting off the coasts to unload from transports. In a pinch, even air units could move into the cities to hold them long enough for ground units to arrive. Being able to advance immediately into Northern Italy or Albania without fighting provides the Allies a significant advantage that should help defeat Germany. Otherwise, German defenders can continue to block further Allied advances from Rome and keep the Allies bogged down in Italy.

Up to this point, not much has been said about attacking into Greece and Southern Europe, the "soft underbelly" of Europe. Invading Greece, whether it's occupied or still neutral, is an interesting strategic option to consider. Landing two or three units to isolate and capture Athens is not particularly difficult unless Axis air units are nearby, but trying to push north across the mountains is very challenging and requires HQ linking. Also, it does not directly threaten either Italy or Germany or deprive them of significant resources. Therefore, a major campaign here is at best a distraction for the Axis and at worse a disaster for the Allies. However, Athens is worth some MPP's and provides air bases for supporting the Italian campaign or for long-range bombing of Romanian oil fields.

D-Day and the Liberation of France

Operation *Overlord* (the Allied invasion of France) began on June 6, 1944. This occurred after *Husky* and *Avalanche* because historically the Allies decided upon a Mediterranean strategy to attack Italy first and then invade Western Europe. In the game, the Allies can choose to either follow the historical Med-first strategy or directly invade Western Europe first and then worry about Italy. The western Allies MUST open a second front someplace during 1942-43 to relieve pressure in the east or else the USSR is doomed.

Prior to a major invasion, the UK could consider raids in Western Europe - landing or threatening to land inexpensive Corps to take Brest, Brussels or other resources. This potential threat will force Germany to garrison its resources and possibly provide additional air and naval protection, drawing forces away from Russia, the Baltic Sea, and the Atlantic. Any actual landing that fails to capture a city (supply source) is doomed to failure, but a successful capture will draw away additional Axis forces to root out the invaders. The UK cannot afford to lose too many raiders, but neither can it afford to sit by passively in this theater and allow the Axis to freely use their combat power elsewhere.

At some point, the Allies will have to invade Western Europe in force to liberate France and drive into Germany. The *Overlord* invasion force structure must be robust enough to achieve the initial objective of securing a city for supply, fending off initial counter-attacks, and having sufficient reserves to replace losses and continue the drive toward Paris and beyond. A weak or uncoordinated invasion could be easily contained by a competent Axis player and probably

destroyed in short order. The Allies absolutely cannot afford to lose an entire invasion force, because it would take about a year to rebuild for another credible invasion. So the Allies must prepare for a major invasion.



Possible D-Day Invasion, June 6, 1944

The four starting American Armies and single Air Fleet without HQ support are woefully inadequate for this task. Much more is needed to succeed, including both British and American forces. Step one is for the Allies to achieve air and naval superiority over the English Channel. This will generally require both the British and Americans to have a couple of Air Fleets and an HQ in England, and will probably take until late 1942 or early 1943 to muster these units and achieve some technology advances in Jet Aircraft research to challenge the German Luftwaffe. The German U-boat situation may be the biggest unknown, so prepare to have your fleets provide protection for your transports and hang on for some excitement. Step two is for the USA to have about five to seven Armies and another HQ ready to embark on transports, plus a few supporting units of the UK ready in England. The American units can either assemble in the US for a direct invasion that will take at least two turns to reach France or be deployed over to ports in England to be ready for a single turn invasion. Once all preparations are made, units can be loaded onto transports and deployed to the French coast.

The easiest technique for invading France and securing a supply source is to land two or three Armies on one side of Brest and two or three Armies and an HQ on the other side. Supporting units can land (or threaten to land) between Paris and Brussels or farther south near Arcachon. Isolate Brest, reducing its strength from eight to five and preventing its garrison from reinforcing to its maximum strength. Attack Brest with combined air, land, and sea attacks to reduce the

garrison and possibly destroying it. With at least four other Armies form a defensive line to ensure the isolation of Brest and protect your valuable HQ, which you absolutely need for your invasion to succeed. Land some of your supporting units to help complete your defensive line or block counter-attack routes, but don't unnecessarily sacrifice them. If you cannot do all this on the first turn, consider aborting the invasion (i.e., do not unload) unless the Axis defense is totally unprepared. A couple of reserve Armies should be moved into place for landings on the next turn, including Brest. Consider moving your American HQ in England adjacent to a port and ready to transport into the port at Brest. You'll be able to continue providing air support from England, but you'll want to get your American air units and HQ over to France early enough to support attacks on both Arcachon and Paris.

Once Brest is captured and a supply source secured for the Allied invasion, then move to attack Arcachon first and then Paris. Why? Until Paris falls and France is liberated, the USA collects MPP's for French resources and is able to build air units in the captured cities. (If Paris is surrounded, however, captured Allied resources still appear to advance from strength five to ten if supply can be traced from the edge of Paris.) Once France is liberated and reactivated as your ally, all those French MPP's go to France and can't be used for anything except French units. Also, if France is reactivated too quickly and the Germans recapture Paris, then France surrenders again and any Free French units in France will disband. So use the time and extra MPP's now to secure western France and build up for the next big offensive.

With good timing, Italy may be surrendering about now if you followed the historical Med-first strategy. Regardless, this operational pause is a good time to bring over an American Tank Group or two, build another Air Fleet and reinforce your other units. When you're ready, push forward to capture Paris and the French mines. It doesn't matter who captures Paris; neither the USA nor UK will receive any plunder. Coordinate your push with British landings near Brussels, ideally with a British HQ. With two or three Allied Army Groups pushing through France and the Low Countries, it's only a matter of time until you push the Germans back to the Rhine River.

Alternative strategies for invading Western Europe include attacking Norway or attacking Spain/Portugal. Like the Greek strategy discussed previously, these options do not directly threaten either Italy or Germany or deprive them of significant resources. For Norway, Bergen is not particularly difficult to take and the valuable mine may be vulnerable, but Oslo is a challenge because you need to land an HQ to support continued attacks. Having long-range aircraft able to rebase across the North Sea is especially helpful up here. And once you take Oslo it takes time to redeploy your forces back for a main invasion of Western Europe. For Spain, time is the biggest challenge for the Allies - time to advance fast enough before the Axis can adequately react. Invading in the northwest near Bilbao risks air and naval interception from Arcachon, plus the challenge of rugged terrain in the area. Attacking from Gibraltar is limited to one unit on the first turn and will take at least two turns to get other units up to attack Madrid. Invading through Portugal may have some appeal, but Spain may react to an Allied invasion of Portugal and join the Axis as a minor ally. If and when the Allies succeed in conquering Spain, the only ways to continue the attack are through the mountains and narrow front to Arcachon, or a declaration of war against Vichy France to attack across a broader front, or a painfully slow redeployment of forces back through the only port in Gibraltar for a main invasion of Western Europe. Like Greece, these are both interesting strategic options to consider but the time wasted may not be worth the effort.

The Road to Berlin

While the British and Americans are fighting to conquer Italy and liberate France, the Red Army should be pushing back on the Axis invaders and reclaiming the Russian Motherland. Focus initially on Axis minors and Italian units, and later on German veterans. Bold and aggressive counter-attacks are then needed in the east, not a linear attack all along the front. If the Soviet breakthrough happens in the north, the goal should not be Smolensk but Minsk farther west. If the breakthrough is in the south, the goal should not be Kharkov but Kiev. Wade through the enemy, isolating enemy units and HQ's, and cutting off his occupied cities. Follow-on units can deal with the unsupplied enemy defenders later. A Soviet Army Group (*Front*) should push through to Helsinki to knock Finland out of the war to gain plunder and secure your northern flank, then redeploy to carry the fight to Riga. Use your partisans to help regain control of enemy territory and seize key terrain in the rear that would help the enemy establish a new defensive line. If the Soviets are successful in encircling and destroying an entire German Army Group, as historically the Red Army destroyed Army Group Center in summer 1944 during Operation *Bagration* (the Soviet summer offensive launched on June 22, 1944), the whole German defensive line is likely to collapse. Fight to retake the RMKO line and throw the last of the Axis invaders out of Russia. The Allies have to be working together and fighting an aggressive war of attrition, continuing to inflict losses on the Axis faster than they can be replaced.

Historically by late 1944 Germany was left with Poland, the Low Countries, Norway and the Balkans, with total production of only about 340 MPP's per turn. This is less than half of their historical high tide total but still enough to put up a decent fight for a while longer. Allied victory at this point is inevitable and the only thing holding up the Allies now is themselves - moving units and HQ's forward, replacing losses, and waiting for supply to catch up with the lead units. Now it's the Allies that must watch their lead units' supply levels to ensure they do not become overextended and vulnerable to limited German counter-attacks, like the Ardennes Offensive (*Wacht am Rhein*, or the "Battle of the Bulge") during December 1944. Once the Allies catch their breath and prepare for the final offensive, the strategy options will look much as they did historically: two or three Soviet *Fronts* attacking through Poland into Germany, one or two Soviet *Fronts* attacking through Romania into the Balkans, two or three UK/USA Army Groups attacking across the Rhine, and one or two UK/USA Army Groups attacking through northern Italy into Germany and Yugoslavia. But don't pause too long and allow the Germans to build new units, establish defensive lines, and entrench - keep attacking and moving forward as much as possible.

A primary Allied objective during the endgame should be to eventually link up the Soviets advancing from the east with the British and Americans advancing from the west. This will cut off Axis resources in the Balkans from Berlin and reduce their maximum strength to five. It will starve Germany of MPP's and permit easier destruction of their forces in the south, thus leading to the surrender of Romania, Hungary, and Bulgaria. This strategy is generally more efficient than separate head-on attacks against Berlin and the Balkans while they are not cut off from each other. When Germany is unable to adequately reinforce losses (total production should be less than 150 MPP's per turn by the end), the final assault on Berlin can commence. A couple of turns of massive air bombardment and ground assault should be sufficient to force Germany to surrender and the game to end. If Italy is still in play, then it should fall very quickly thereafter.

IV. GENERAL TIPS

Headquarters

Probably the most important tip is effective use of Headquarters (HQ's). HQ's can make or break an offensive or defensive situation. HQ's not only add leadership bonuses to units under their command but can also influence unit readiness and ultimately combat outcomes as seen in the Unit Formulas section of the User Manual. These are two separate functions that have an incredible impact in the game. HQ's are the ultimate combat multiplier in the game.

The HQ leadership bonus for attached units takes the form of the predetermined commander rating (e.g., Rommel has a rating of eight) and the combat morale bonus based on experience gained by units attached to the HQ. The command rating and combat morale bonus are key components of unit readiness which represents its overall combat power, so having HQ support significantly enhances a unit's effectiveness in the attack or defense. The actual net advantage of HQ support is that an average HQ adds about a strength point of net enemy damage when attacking and prevents about half a point of friendly damage when defending. The bottom line is that units with HQ support receive a bonus when attacking and defending, and the bonus is important.

Unfortunately, unit attachment to an HQ is limited to the five closest "home" units that are within at least five hexes. If there is more than one HQ in the area then the game will attempt to allocate attachment as best fits the above requirement. This unit attachment DOES NOT extend to minors or allies and cannot be changed by the player during a game turn; e.g., Canadian units do not receive British HQ bonuses and Romanian units do not receive German HQ bonuses. A player can affect which units are likely to get attached to a particular HQ by where they position it, so keep the HQ located near your key units. Also watch your force ratios so that you maintain adequate HQ support for all your key units in a campaign. In many cases it is far more important to build another HQ than to build more ground units that fight without HQ support.

The HQ supply function extends to all friendly units within range, including minors and allies. The HQ unit simply serves as a valid supply source. For the HQ to provide maximum supply, it must be in supply itself and have a unit supply value greater than five. At five or less, HQ supply drops to eight. If out of supply, HQ supply drops to five. And distance from a valid supply source is one of the factors that affect any unit's supply, with supply being reduced according to the terrain movement costs (MC) for the virtual supply trucks (e.g., mountains and marshes cost two Action Points (AP) and reduce supply by two for each hex.) So what does this mean for the units in the field? Units with a supply value greater than five have maximum action points for movement and maximum reinforcement ability. At five or less, there is a -1 AP penalty and unit reinforcements become limited. If out of supply, there is a 50% AP penalty and no unit reinforcements are allowed. Supply is also a key component of unit readiness that represents its overall combat power.

So ideally you want units within range of a fully supplied friendly city or an HQ to maintain supply values greater than six. HQ's can be linked to supply each other over extended distances, which greatly helps when you have Scorched Earth effects, partisan effects, or rough terrain to

deal with. Double up your HQ's to create awesome supply. Beginning players should check their unit data each turn to get a feel for supply effects and learn to anticipate supply limitations so they don't overextend themselves. (And even experienced players should periodically check their units to verify their supply status.)

HQ's present a dilemma for most players. You want their leadership bonus forward to help your lead units in combat. Yet, you also want to maximize their supply value and this usually requires keeping them back within range of friendly cities or other HQ's. Keeping them back is generally not a problem since they move slower and this also helps keep them out of range of enemy air spotting and attack.

HQ's have a low defense that makes them easy to damage or kill, so be cautious with them. (HQ's could occasionally be used on the front line if necessary, as many players waste their time beating up on them rather than attack units that are kicking their butt.) If attacked, HQ strength losses have no effect on their leadership and supply functions, but they are very expensive to repair and once killed, unlike combat units, HQ's are gone forever. If an HQ is killed, all nearby units will also suffer and become easier to attack. Reinforcements will help assure continued survival of HQ's but will necessarily reduce their valuable experience. And MMP's spent on repairs are still MMP's used whether spent on combat units or on HQ's, so players must consider these tradeoffs.

Effective uses of HQ's end up being an art form in this game. There are so many variables to consider depending upon specific situations that players should experiment with various techniques and learn to recognize what works well and what doesn't.

Unit Experience

Probably the next most important tip is effective use of unit experience. As seen in the Unit Formulas section of the User Manual, experienced units take fewer losses in combat. Units gain experience points based on various types of combat: +0.2 for attacks; +0.3 for kills; and, +0.1 for defending. Experience has a maximum value of four, and is reduced whenever a unit is reinforced. Players should attempt to maximize unit experience whenever possible and consider the tradeoffs between reinforcing an experienced unit with fresh troops and continuing to fight with its experience bonus.

Additionally, unit victory or defeat based on relative losses between attacker and defender will affect its supporting HQ's experience by +/- 0.1, which in turn affects its combat morale bonus. Therefore, players should attempt to maximize HQ experience by verifying which units are attached and what the expected losses are for a particular combat by looking at the top of the game screen while your cursor is over a target unit. Try to make all victories count and avoid defeats. Orchestrating a battle to use unattached units first to wear down a defender followed by attached units to achieve victories is a good technique to use.

Again, effective use of HQ's here ends up being an art form in this game. In general, unit experience and combat morale bonuses can be powerful combat multipliers if built up and maintained, but are perishable assets that should be used with great care.

Moving Units and Combat

Most terrain movement costs and rules for regular movement, operational movement, and naval transport are well documented in the User Manual, but several subtleties and undocumented features are worth reviewing. First of all, units can move and engage in blitz combat or engage in regular combat without any movement. Movement is one of the factors that affect a unit's supply, which in turn affects its readiness and combat effectiveness. So there is an advantage to conducting a deliberate attack without moving first, and this should be considered as you move units into place for the next turn's combat.

Operational (op) movement provides strategic flexibility but requires certain conditions be met: the unit's supply value must be greater than five (three for air units), and an unbroken path of friendly land hexes must be available from selected ground units to final destination. So watch for units becoming isolated or unsupplied which can prevent them from being op moved. Another comment about op moves for air units - it's the only way to move air units from the USA to Europe, and many new players do not realize this. (Note that UK and USA are able to place newly built air units directly in captured cities in France, mainland Europe and in North Africa, thus saving op move costs.)

Several factors contribute to impede unit movement, besides the terrain movement costs (MC) described in the User Manual. Already mentioned are the AP penalties for units with reduced supply or out of supply. There is also a +1 MC for uncontrolled river hexes and for moving between two enemy units. The river hex penalty only lasts until the hex is controlled. Once a river hex is in your control it's assumed you have built bridges across it and regular action movement points apply. The Suez Canal is considered a river hex. The penalty for trying to pass through two adjacent enemy units lasts until one or both of the enemy units is eliminated and you have at least a two-hex wide path. This is about as close to the traditional zone of control (ZOC) rules that are used in many other games. Understanding how these various factors can affect unit movement is necessary for sequencing your movements and combats to gain as much ground as possible. The "Gaining Ground" theory, for instance, proposes that rear units could be advanced to take control of river hexes and allowing forward units to maximize their movement. This is a non-intuitive concept players should experiment with and learn to recognize what works well and what doesn't.

Some terrain factors that affect unit combat are not fully documented in the User Manual and have caused some confusion for players. Most significant, the attacker is reduced to 50% offensive power when attacking from a river hex. (However, there is no river hex attack reduction across the Strait of Messina between Sicily and Italy, and probably at a few other crossing locations on the map.) In general, the Terrain Values chart in the User Manual adequately documents the various defense bonuses for forests, marshes, mountains, and other terrain types. But note that rivers offer zero defense bonuses for units on a river hex itself. Defending units must be behind a river to benefit from the attacker penalty.

Amphibious landings onto enemy territory are often challenging for new players to master. It takes a turn to load units adjacent to a friendly port with strength greater than five onto transports and move them within the limit of their action point radius. It then takes another turn

to unload onto an unoccupied coastal hex. While transports are waiting to unload, they are vulnerable unless you have air and/or naval protection in the landing area. When unloading onto enemy territory there is a 40% chance that a landing casualty penalty of anywhere between one and five strength points may be incurred, but each landed unit does start with a supply of ten for maximum readiness. (This readiness bonus is often confused as a “surprise” bonus.) Supply at sea is independent of this and is affected by the normal sea supply calculations. Once each unit lands they receive an action point value of one, after that the regular rules of land movement apply. Unless an HQ lands or the units capture a city on the first turn, they will be unsupplied and combat ineffective on subsequent turns. Therefore, amphibious operations generally need advanced planning and coordination. Surprise is usually the master key to success, but could easily be compromised by a vigilant opponent reviewing the Intelligence Reports and noting an increase in enemy naval activity.

A very interesting aspect of *Strategic Command* is the Fog of War rule where partial visibility is given to any unit that is located within the spotting range of a friendly unit or resource, while all remaining enemy units are hidden from view until eventual encounter. Full visibility is only given to enemy units that are adjacent a friendly unit. FOW makes this game exciting. Ground maneuver units can spot enemy units only as far as two hexes, and if you charge into enemy controlled territory you risk being stopped by an unspotted unit (a surprise encounter!) and unable to attack. You may even take casualties and leave yourself vulnerable to counter-attacks during your opponent's turn. To prevent being ambushed, use your air units with their long-range spotting capability or leapfrog units from the rear to the front to provide forward spotting (scout units). Even naval units at sea should proceed with caution or risk surprise encounters with enemy fleets or submarines. Strategic resources, even if unoccupied by enemy units, still provide spotting into adjacent hexes so be cautious trying to sneak up to them or trying to sneak transports past them.

Use the FOW thing more. Occasionally sacrifice inexpensive Corps by sending them on suicide missions to mess with your opponent's head but recognize the risks of wasting useful units if they fail to achieve anything. Move them into the seas, near his ports, anywhere to hopefully cause some useful distraction. Use Corps in Russia so your opponent moves his lines. Many players panic unnecessarily when presented with a well-placed feint. Remember that while you can use FOW to your advantage, the enemy can also.

Another point of confusion and frustration to many players are the air rules for escort duty and interception. Air Fleets may be automatically activated in an escort role when a Strategic Bomber run is likely to encounter enemy interceptors, or automatically activated in a defensive role whenever an enemy's air unit is attacking a friendly target. These activations will only occur if the air unit has not moved and has strength greater than four. Air Fleets intercept out to their spotting range (S) but they provide escort out to their *strike range* (R).

Generally, this duality makes Air Fleets extremely useful when properly located on the map, but can result in unanticipated activations and unnecessary losses if they are not properly located. HQ support will of course enhance their abilities and minimize losses, so try to keep your HQ's close. If you find your air units being activated and taking losses, either reinforce them or move them away. This is what air superiority is all about - either you have it or you don't. If you're not

prepared to fight for the airspace, don't leave your air units vulnerable. This can be a painful and expensive lesson to learn, so exercise some caution when contesting airspace.

Miscellaneous Tips and Tricks

Other tips include keeping an eye on the War Map join percentages when playing in random mode as well as reviewing the Intelligence Reports. Also, keep an eye on enemy unit movements during your opponent's turn. You might spot a fleet movement, identify the location of enemy air units, or see where a weak unit retreated. Every little piece of information you can get will help, and often it's the little things that make a big difference in this game.

Don't be too shy about occasionally trying something a bit ahistorical. For instance, Allied submarines can be just as useful as U-boats in harassing the Axis fleets with surprise encounters. A German Carrier providing air support for its subs in the Atlantic or an Italian Rocket Detachment in the Med can be quite a surprise to an unsuspecting Allied player. Doing something your opponent does not expect could succeed in planting doubt in his mind, making him adjust his strategy or take counter-measures. This could be useful.

Some ideas for creating a successful breakthrough:

- Target low-experience or minor allied unit, preferably one that sits in a "bulge" in the line where you can get two or three whacks at it. The experience and strength of the unit are more important than the size. An experienced Corps can be tougher than a rookie Army. And avoid entrenched units if possible. The best "candidates" are new units that have just moved into the line, or units that have been seriously wounded and have been heavily reinforced in the previous turn.
- Look for clear terrain: No marshes, rivers, etc. to slow down your breakthrough.
- Look for hexes that are furthest from towns, so your opponent cannot "operate in" or "purchase" instant reinforcements. (In *Strategic Command*, everyone is like the Red Army. Units go into battle right off the trains...this is a little weird.)
- Air, air, air: Try to kill the unit with your air units, so your adjacent ground units can achieve a breakthrough.
- When you make a hole, exploit Tank Groups (or Corps) through to attack adjacent hexes from the rear. From the initial penetration hex, widen the gap to each side (hopefully). If you don't have a lot of spare units, be sure to have at least one "free" unit to stick in the hole as a "place holder." You can then move through it on the next turn. Try to keep the momentum of the breakthrough so he can't reinforce or close the gap.
- Try to get as many of "your color" hexes behind the enemy line as you can and isolate pockets - it puts them out of supply and they become easy targets on the following turn. On long fronts (like in Russia), Tank Groups are good for this. Try to get two penetrations about four to six hexes apart, then "connect the dots" with a tank running from one hole and one running from the other hole. Then the infantry can work to surround them. Even if you lose a tank unit, you can surround and destroy several of the enemy units, or force a large-scale withdrawal. If you can pull this off with Corps, so much the better - they're cheaper.
- Avoid the temptation to go too "deep" into the enemy's territory too soon. Work along the line, killing his "up front" units. A one- or two-hex gap can be reinforced. A big hole will usually force a withdrawal. Keep your units together in case of a counter-attack. And watch your supply

so you don't overextend yourself; keep an HQ nearby if possible.

- Remember, you're really trying to force a withdrawal ... not necessarily trying to kill everything in sight. Capture ground, resources, MPP', etc.

- Finally, if the enemy doesn't withdraw then try to turn large fronts into small, isolated groups. Make him pay for being heroic!

Some additional ideas (rules of thumb) to think about:

- Use the HQ experience rules to your advantage. When conquering a fortified city, try to use non-supported units first (to reduce the entrenchment values) and let the HQ-supported units take the credit for the last winning battles hence increasing the HQ experience. Usually useful in Russia when taking highly fortified units with a combination of German HQ-supported units and non-supported allied units.

- Try to kill off a unit with an expensive high strength unit. It is better to gain the +0.3 kill experience with an 8-strength Tank Group than with a 10-strength Corps.

- Try not to move defending units too much. They need to be entrenched to delay the attackers the most. In the defense, it is often good to have a Corps in a "no-win situation hex" since it will cost less to reinforce it or "cost less" when it's destroyed and needs to be replaced.

- In some naval battles, it could be worthwhile to send out a Corps transport to spot enemy naval positions and then strike them after they surprise the Corps.

- In a battle for air superiority, try placing your best HQ near the Air Fleets and make your first air attack with your best air unit. If you win more air battles than you lose, then your opponent will lose HQ experience while you gain HQ experience. That will help tip the scale in your favor (sometimes crucial in the Battle of France in 1940).

- There are three goals with an attack:

- a) Reducing the enemy entrenchment values so that it can be taken next turn.

- b) Inflicting casualties on the enemy to make him pay reinforcement MPP's.

- c) Destroying the enemy unit.

First decide where you can break through (by destroying a unit). If you cannot, then try to inflict as many MPP losses to the enemy as possible. Do not waste three or four attacks on a Corps without killing it, when you could have damaged one of his Armies or Tank Groups instead.

- Make sure that frontline units have HQ support. If you have three HQ's and only two of them support the front then it could very well turn out that those two HQ's take their units before the third - hence leaving some frontline units without HQ support. If you have sixteen units and three HQ's or eleven units and two HQ's, then move or operate some Corps far away from the HQ's and frontline so that the HQ will not pick that Corps instead of the frontline units.

- When defending against a stronger opponent (e.g., Germany versus France, Germany versus Poland), do not counter-attack if you will suffer excessive losses or have to move around your units too much. The non-entrenched moved damaged units can be slaughtered next turn by the stronger attacker. The ideal is if you can counter-kill an enemy unit and cover it by sending some sacrificing Corps to fill the gaps. Check the expected losses display before making counter-attacks. It can give you a hint about what losses are to be expected after you have made multiple attacks on the enemy unit. Perhaps he is without HQ and you read "Att 1 Def 3" already on the first attack; i.e., beneficial to attack.

- Try to give the HQ support to the units where most fighting takes place. There is no point in a French HQ supporting the Maginot Line units at the expense of leaving a Low Countries border defender without support.

- Defending against naval bombardment is usually a no-win situation. Generally, devote this job

to a Corps since they are cheaper to reinforce. HQ support helps.

- Try to have four or five air units ready to punish enemy HQ's going too near the frontline units. Since some enemy units probably are some hexes away from cities, it is tempting trying to increase their supply by having an HQ near.

- When invading France you can load and unload transports on the same turn when going from London to Calais. Simply put a fleet in the port and when you load the transport it will appear adjacent to the French coast. Since it has not yet moved, you can unload on the same turn. This tactic also works for invading Ireland from Manchester and for other interesting situations.

V. RESEARCH

Different strategies warrant different forms of Research and Development, so some technologies might be better suited than others depending on the needs of your war machine. The three naval powers (UK, USA & Italy) and the two land powers (Germany & USSR) generally have different goals, but there are several tech areas that are applicable for everyone. Only the major combatants can conduct R&D, and any benefits achieved will immediately update all relative units on the map. These research benefits DO NOT extend to minor allies such as Canada, Hungary, Romania, Bulgaria, and Finland, or Spain or Turkey if in play. Free French units only get French technology advances obtained prior to the surrender of France; they do not get UK advances. Players should take some time to study the various Combat Target Values in the User Manual and how research results affect them. A Technology Effects chart included in Section IX at the end of this guide as an aid.

Players should give some serious thought to how much research they can afford and whether to transfer or reclaim tech investments at some later time. Each research point costs 250 MPP's and the total maximum research funding cannot exceed ten points or 2500 MPP's. Up to five research points can be put into each research type. At the beginning of each turn, each research point has a variable 5-4-3-2-1% chance of returning the next level of research depending on your current level (i.e., each point will have a 5% chance for advancing to Level 1, 4% to Level 2, 3% to Level 3, and so on.) Each point also receives a normalization factor based on enemy research of +1% for each level difference (i.e., if you're researching a Level 1 tech and the enemy already has Level 3, you would get a +2% bonus for each point.) A 5% chance will, on average, return an advance in about a year in the game.

Obviously, the more research points put against a particular type of research, the better the chances of achieving the next level. Players should consider if their investment costs are worth the expected benefits over time, and periodically reevaluate their research priorities. For instance, Germany can afford to invest in research early and see worthwhile results over the course of several years while France cannot. Reclaiming a research point later has a transfer penalty of 50%, and it may be more worthwhile to use 125 MPP's elsewhere rather than wait for a 1-2% chance for advancing to Level 4-5 once you reach those higher levels. Research is a wonderful thing in this game, but resources are limited and players have to decide what is more important – actual combat units on the ground now or wishful thinking in pursuit of super weapons that may or may not happen later.

What to research is up to each individual player, and the randomness and variability of research makes this an exciting aspect of the game and assures its replayability. The really distinctive development of World War II has got to be airpower, and all players should attempt to achieve advantage or at least parity in the air. Another important development was armored and motorized forces that provided great mobility and penetration power, so the land powers should also attempt to develop the tank and anti-tank techs for long-term success on the ground. One other development was the U-boat with its ability to threaten the UK's sea supply lines, so the naval powers should consider the submarine and anti-submarine techs for success at sea. And finally, WWII being essentially a war of industry, players should attempt to get their armaments industry in full gear as soon as possible to meet the demands of Total War. These are often conflicting challenges that will force players to choose a particular research strategy. The following is a breakdown of the benefits for each research type:

Anti-Tank Research

Anti-tank research encompasses towed and self-propelled anti-tank guns as well as the later panzerfausts or bazookas developed by Germany and the USA, respectively. Each new level of anti-tank research not only increases the *tank defense* (TD) values for both Corps and Army units, it increases their maximum strength. This enhances their survivability and combat power. Since most armies are composed of large numbers of these infantry units, a few advances can provide considerable benefit for more units. This technology is especially important for the USSR's survival, but also important for all armies.

Heavy Tank Research

Both the Axis and Allies put extensive research into developing the next generation of medium to heavy tanks. Some of the more notable heavy tanks of the war included Germany's Tiger I & II, and the USSR's KV series of tanks. Each new level of heavy tank research increases the *tank attack* (TA), *tank defense* (TD) and maximum strength. This is important for Germany's early successes using blitzkrieg tactics, but players should note that *soft attack* (SA) and *soft defense* (SD) values do not change. As enemy anti-tank defenses improve, tanks begin to lose some of their effectiveness. However, the real value of tanks is their mobility – the ability to penetrate and encircle enemy formations, or to react to enemy penetrations. If used properly, Tank Groups can be useful throughout the game.

Both Germany and the Soviet Union will have large numbers of armor units in the game. For them, more units would benefit by this technology choice than by others. Armor units can take and hold ground, aircraft can't. The USA will eventually need some effective Tank Groups as offensive maneuvering units so they would also benefit by researching this tech - no one wants to deploy Sherman tanks against Tigers. Neither the UK nor Italy will be able to afford many Tank Groups, so this tech may not be very cost effective for them. However, both can expect to receive a research bonus due to the competing German and Soviet advances in heavy tanks and this should be taken into account.

Anti-Aircraft Radar Research

This research provided both sides with a more effective defense from air attacks with improved detection and accuracy. Every new level of anti-aircraft radar research improves the *air defense* (AD) values for all Strategic Resources and the air defense improvements are cost free; i.e., no production or reinforcement costs. As an added bonus defending units located on these resources will also receive the anti-aircraft radar bonus when defending against air attacks. Additionally, there is no visible indication of increasing *air defense* values for your opponent to observe, and this may provide a useful advantage over time.

This technology is often an inexpensive way to counter enemy air superiority. For example, no country will be pounded more by Axis air than the Soviet Union, so anti-aircraft radar could help defend valuable resources until the Soviet air force is ready to take on the Luftwaffe. Germany and Italy can choose to suffer Allied air attacks and bombing losses in the west and pay for expensive air unit reinforcements, or invest some MPP's to improve air defenses.

Long-Range Aircraft Research

An essential development throughout the war years, long-range aircraft provided an effective means of attack and defense on almost every front. Notably, long-range aircraft enabled the Allies to finally close the air gap in the mid-Atlantic as well as allow for the deep penetration into Axis held territory. Every new level of long-range aircraft research increases the spotting (S), action points, and *strike range* (SR) values for both Air Fleets, and Strategic Bombers. Also, every new level of long-range aircraft research increases the spotting (S), *strike range* (SR), and maximum strength values of Carriers. As an additional bonus, the long-range aircraft improvements are cost free for both Air Fleets and Strategic Bombers; i.e., no production cost increases like for Carriers.

This tech is particularly useful for increasing spotting ranges and for re-basing air units across large bodies of water, like the Mediterranean or North Sea, so it is especially useful for the UK and Italy that both need air support at sea. It is also helpful to Germany, providing increased flexibility for its Luftflottes in Russia.

Jet Aircraft Research

Jet aircraft, such as the ME 262 fighter and the Arado 234 bomber, both produced by Germany, shocked the Allied Air Commands in the closing stages of the war. Yet, production problems and limited numbers never truly allowed these aircraft to impact the course of the war. Nevertheless, many historians agree that had such aircraft been developed earlier, the outcome of the war could have ended much differently for the combined Allied forces. Every new level of jet aircraft research improves the *air defense* (AD), and *air attack* (AA) for both Air Fleets and Carriers, and the *air defense* (AD) value for Strategic Bombers is also increased. In addition, the maximum strength value for Air Fleets is increased.

This is a technology that provides an unusually large amount of benefits for everyone. It is just about THE most important tech to research, because the *air attack* value can be used against

everything and makes high level jets a very powerful unit in the game. Combined with long-range, experience and HQ support, Air Fleets can become very deadly. Many games often are a race to see which side develops jets first. As powerful as jets may become, they are still vulnerable to attrition and the research normalization helps lagging nations to catch up.

Heavy Bomber Research

As the Second World War came to an end, heavy bombers emerged as pivotal players in the role of disrupting supply lines and destroying vital factories and resources. Every new level of heavy bomber research improves the *strategic attack* (SA) and maximum strength values for Strategic Bomber units. What some players fail to appreciate about bombers are their other capabilities besides strategic bombing: long-range spotting, reducing enemy entrenchment levels by -2 points per attack, and a *naval attack* (NA) value of five. Having a bomber in range can often provide an advantage in many situations, particularly in the Mediterranean theater for both the Axis and Allied players in the early years. At higher levels, bombers can inflict both immediate and long-term MPP losses from damaged or destroyed enemy resources, and a single bomber supported by escorts can often keep several resources at low strength.

Sonar Research

Sonar development was essential in defending from submarine attack, as well as submarine detection and destruction. Every new level of sonar research improves the *naval defense* (ND) values of Battleships, Cruisers and Carriers when attacked by submarines. Also, the sonar improvements are cost free; i.e., no additional production or reinforcement costs. If the Allies neglect this research area, they risk having a difficult time with German U-boats later in the war if Germany pursues an aggressive submarine warfare strategy. The computer AI in the game won't do this but a human Axis player very well might. Being surprised by several high tech Subs can often cripple an unsuspecting Allied player before he has time to catch up with a last-minute research effort. However, Subs are generally easy to find and kill, particularly with air units and Carriers that can attack without taking losses, until the Subs reach the higher tech levels with improved chances of evasion. Even then Subs remain vulnerable to air attack and have limited offensive capability, so some players consider sonar research to be of limited value.

Advanced Sub Research

Advances in Sub design and technology allowed the German Navy to re-enter the Battle of the Atlantic in the later stages of the war. Most notably, the snorkel allowed German U-boats to remain submerged while recharging their batteries with their diesel engines. Again, these and other developments failed to have any serious impact on the course of the war due to production problems and dwindling resources as the war drew to a close, but could have affected the outcome of the war had they been developed earlier. Every new level of advanced sub research improves the *naval attack* (NA) and maximum strength values for submarines. Transports become especially vulnerable targets. Also, submarines in general have a 25% chance of successfully diving from either naval or air attack, and with each new level of advanced sub

research this percentage improves by +5%. For both Germany and Italy that begins the war with Subs and has surface raiding opportunities, this is a particularly useful research area.

Gun Laying Radar Research

Both the Axis and Allied navies experimented with various types of radar to improve the accuracy of their big guns for naval combat. Every new level of gun laying radar research improves the *naval attack* (NA), *naval defense* (ND) and maximum strength values for both Battleships and Cruisers. The UK and Italy, with the largest fleets in the game, would benefit most by this technology. Early advances in this area will help either side establish superiority at sea. Later, the Allies will benefit from higher strength values when performing shore bombardments to support their invasions of Italy and France.

Rocket Research

Both sides worked on developing various types of surface-to-air, surface-to-surface, air-to-surface, and air-to-air rocket technology. Some of the most notable rocket developments of the war were the V-1 and V-2 rockets developed by Germany. While the V-1 became more of a nuisance to the Allies, the V-2 presented a potentially serious threat. Luckily for the Allies the V-2 program suffered from many of the common problems Germany faced in the later stages of the war, material and fuel shortages, as well as disrupted production. Every level of rocket research improves the attack values (TA, SA and NA) and *strike range* (SR) for all Rocket Detachments. In fact, this is the only research area that improves a unit's *soft attack* value.

The key benefit of Rocket Detachments is that their attacks can not be defended against or intercepted, making them the only units in the game that do not receive damage when attacking. Rocket detachments can only lose strength points from direct attack by other units. Rockets are particularly useful for attacking tough fortifications like Malta, Leningrad and Sevastopol, and for bringing down the entrenchments level of other difficult positions without loss. They are generally awkward to use and expensive at lower levels early in the war, but even a low level German Rocket Detachment can reach London from Brussels. Higher-level units with increased range, effectiveness, and experience can be especially lethal later in the war for Germany and USSR. Because Rocket Detachments can't be transported, they are useless for the USA and nearly so for the UK.

Industrial Technology Research

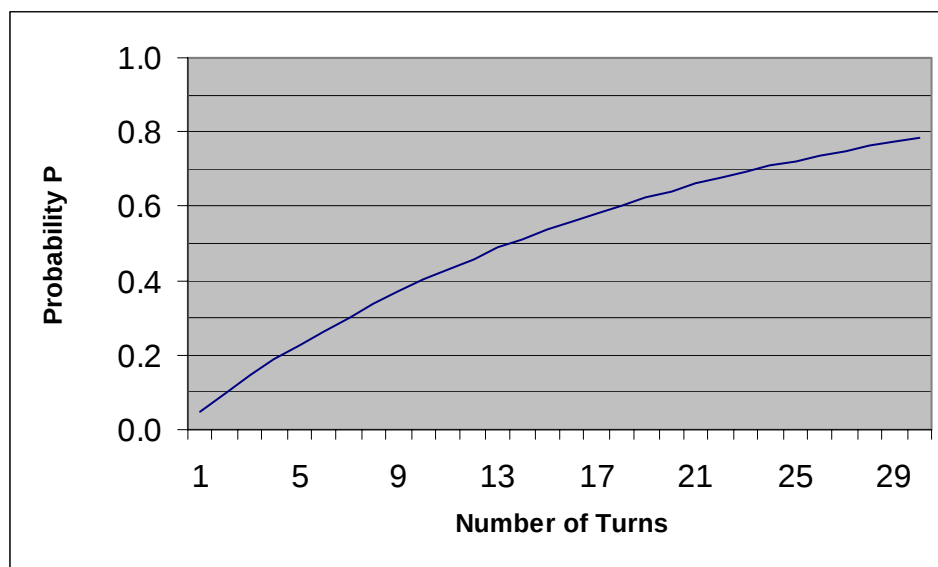
In general, the penalty for attaining new levels for any of the above research results in a production cost increase of 10% for the unit(s) it applies to. Thus, to offset this penalty, developing industrial technology improves the capacity and development time of war production and materials. Every new level of industrial technology decreases the cost of production for each unit by 5%. Thus, as production costs rise to about 150% for Level 5 techs, IT savings are only increasing to about 25%. The "war of industry" becomes somewhat self-limiting, as nations struggle to keep up with the increasing costs of building new high-tech units and replacing those that have been lost. The USSR and USA enter the war with higher IT levels, allowing them to

advance to the higher levels more quickly and out-produce the Axis. Germany will struggle to keep up, unless they choose to develop a war economy sooner than they did historically. Industrial Technology is usually beneficial for most countries, but may not be cost effective for a low MMP country like the UK and Italy and their limited research efforts may be better used in other areas.

Research Results

All players would like to know when to expect research results. A simple estimate can be obtained by taking the inverse of the research chance. For a single research point invested at Level 0, the chance of success is 5% per turn. So the average number of turns to achieve Level 1 is $1/.05$, or 20 turns. Right? In actuality, it's a bit more complicated than that because each successive trial - while independent - produces a cumulative effect over time.

The chance of success by a given turn is equal to 1 minus the chance of no success (failure) up to and including the given turn. Take that single research point on turn one. A 5% chance of success means a 95% chance of failure. 1 minus .95 equals .05, or a 5% chance of success on the first turn, as expected. On turn two, assuming failure on turn one, the chance of failure two turns in a row is equal to $.95 \times .95$, or 90.25%. So, the chance of success on turn two is $1 - .9025 = .0975$, or a 9.75% chance. For turn three, $1 - (.95)(.95)(.95) = .1426$, or a 14.26% chance of success. And so on. The following graph displays the cumulative chances for success over time for about 30 turns. This is a smooth function that increases rapidly at first and then begins to taper off. Most noteworthy is the fact that this is not an S-shaped curve typical of a normal distribution, or "bell curve" distribution around an average result, that some players may be expecting to see.



Probability $P=1-(1-p)^n$, for $p=0.05$

A more realistic estimation of the average number of turns needed for advancement is when one reaches the 50% probability of success point. For the single research point at 5%, this works out to be 13.51 turns, or a little less than a year of game time. This can be seen using the formula above where the chance of success by turn 13 is 48.67% and by turn 14 is 51.23%. Despite some

complicated mathematics, most players should recognize this as a fairly intuitive result for the 5% research chance - the average time for advancement is about a year.

Obviously, more research points will yield faster results while fewer points (or less effective points as higher tech levels are reached) will yield slower results. A 10% chance should produce a result in about 6.58 turns, while a 3% chance will take about 22.76 turns. The following table shows the expected number of turns for advancement for chances of 1% through 10%. Taking our single point example, how long should it take to advance from Level 0 to Level 5 in a particular research area? With 5-4-3-2-1, the total number of turns to reach Level 5 should be about $14+17+23+34+69$ or 157 turns. That's more than ten years of game time! Yet, we routinely see some advances up to Level 5 within four to five years. Conversely, we often see no advances for very long periods, perhaps never reaching Level 1 by game's end. Why is that?

Chance, p (%)	Turns, n
1	68.97
2	34.31
3	22.76
4	16.98
5	13.51
6	11.20
7	9.55
8	8.31
9	7.35
10	6.58

50% Probability Point, $n=\log(1-P)/\log(1-p)$, for $P=0.5$

The 50% chance of success occurs at 13.51 turns, but by turn five the chance of success is up to 22.62%. That's a pretty good chance for an early success. Conversely, by turn 30 the chance of success is only 78.54%. That's a 21.46% chance of 29 consecutive failures, about two years of game time. What we have in Strategic Command is a very broad distribution of results that produces a high degree of randomness. That's very good for replayability, but terribly frustrating for many players who expect timely returns on their research investments. Probabilities and averages all appear to be working well in the game, it's just that Lady Luck has a very heavy hand in the works. That's what makes each game so interesting and unique.

VI. RESEARCH SUGGESTIONS

This section is somewhat subjective, as each player eventually develops his own research strategy preferences. Since these are only suggestions, assume here that nations will invest about as much in research as was allotted historically by 1942-43. Exact numbers are debatable, but some reasonable benchmarks may be useful so beginning players can assess their strategic options: Germany seven or eight points, Italy about two points, United Kingdom three or four points, USSR four or five points, USA four or five points, and France maybe one point. Some players feel compelled to maximize their research investment as soon as possible, but 2500 MPP's for ten points is a high enough price for Germany to pay and a significant challenge for anyone else. The estimates above are easily achievable and allow for historical campaigns to be

conducted, but players will have to decide for themselves whether to invest more or less in research depending on their grand strategy goals.

There are some obvious and significant advantages to maximizing research and attaining the highest technology levels, but there is also the risk of not building enough combat forces to adequately support your campaigns on the land, air, and sea. Because of the 50% transfer penalty, players should consider putting in only one or two points per research area and leaving them there until they reach a sufficiently high level. More points will definitely yield faster results, but those 125 MPP reclaim losses start to add up quickly. Yet, some players successfully invest four or five points in a key area to gain an early strategic advantage that may offset those reclaim losses. Until they are comfortable with more aggressive research strategies, players should seek to find a reasonable and economical balance between investing in research for long-term technology advances and the more immediate requirements of fighting and winning a war. The following are some general suggestions for research allocations by country:

Germany (a land power, 7-8 points)

Germany will dominate the game with its large armies and air forces, and is also capable of waging war at sea. Germany is able to invest a significant portion of its production and plunder from conquests into research during the early years and potentially achieve rapid technology advances. In general, Jet Aircraft, Heavy Tanks, and Anti-Tank Weapons research all provide very useful benefits. Players fond of air strategy might chose Long-Range Aircraft and Heavy Bombers. Players fond of naval strategy might choose Advanced Subs and Gun Laying Radar. Anti-Aircraft Radar and Rockets are also interesting choices. Once the USSR and USA enter the war, Germany will receive a research bonus for Industrial Technology and will need this tech to catch up with the Allies.

Italy (a naval power, 2 points)

Italy has a limited economy and cannot support large armies or a large research program. It does start the war with the second largest fleet. Gun Laying Radar and Anti-Tank Weapons are useful research areas. Heavy Tanks, Advanced Subs, Anti-Aircraft Radar, and Industrial Technology are also interesting choices. Whether or not Italy should build any air units is an important strategy decision, since expensive air units are generally not cost effective with Italy's limited economy. If superior German Luftwaffe air units are not relied upon, then Jet Aircraft and perhaps Long-Range Aircraft should be considered to at least make an Italian air force competitive.

United Kingdom (a naval power, 3-4 points)

Like Italy, the UK has a limited economy and cannot support large armies or a large research program. It does start the war with the largest fleet and the largest air force. Gun Laying Radar, Jets, Long-Range Aircraft, and Anti-Tank Weapons are useful research areas. Heavy Bombers and Anti-Aircraft Radar are also interesting choices. Later in the war, Heavy Tanks and Industrial Technology could also be considered.

USSR (a land power, 4-5 points)

The Soviet Union enters the war with some advances in Heavy Tanks, Rockets, and Industrial Technology, plus several research points and enough MPP's to buy more. Anti-Tank Weapons, Anti-Aircraft Radar, Heavy Tanks, and Jet Aircraft are all useful research areas. Rockets and Heavy Bombers are also interesting choices for later. Whether or not to invest in Industrial Technology is an important strategy decision. Since the USSR enters the war with Level 2 Industrial Technology, additional advances may be slow and investment in this area may not be cost effective. However, even a single research point could yield lucky advances, so this is also an interesting choice.

USA (a naval power, 4-5 points)

The USA enters the war with some advances in Long-Range Aircraft, Jet Aircraft, Heavy Bombers, Gun Laying Radar, and Industrial Technology, plus a couple of research points. Although it starts as a naval power, the USA will eventually have to fight on the ground and in the air to win. Spending during the early years should be weighted toward research investments that will transform it into a land power. Jet Aircraft, Anti-Tank Weapons, and Heavy Tanks are useful research areas. Long-Range Aircraft, Heavy Bombers, Gun Laying Radar, and Industrial Technology are also interesting choices, as the USA starts with tech advances in these areas and could continue to develop them.

France (a land power, 1 point)

Research is generally a waste of effort for the French. A single point is not likely to produce a tech level advance by the time Germany attacks France, which could be as early as the third or fourth turn. Even for an attack later in spring 1940, you only have about a one-in-three chance of getting a timely advance. If France decides to invest in research at all, Anti-Tank Weapons is the most useful research area. Jet Aircraft and Gun Laying Radar might also be interesting choices. Any advances here carry over for Free French units and later for units of liberated France. And a quick advance may also allow time to reclaim 50% of your investment and build another Corps. However, even a lucky advance in something like Anti-Tank Weapons may improve the French defense but will not guarantee survival.

Sharing Research

There is no provision in the game for sharing research advances with your allies. Therefore, if both Germany and Italy want to research Jets, or both the UK and USA want to research Heavy Bombers, they must each invest their limited research points in those areas. A strategy to consider is to have each nation focus on a particular area; thereby maximizing research advances to be used against the enemy. For example, Germany could focus on Jets and provide Luftwaffe Air Fleets to Italy as necessary, allowing Italy to focus on Gun Laying Radar. The UK could focus on Gun Laying Radar while the USA focuses on Heavy Tanks and Heavy Bombers. The bottom line is that the Axis will probably have about ten points total invested in research by 1943 while the Allies have about thirteen. Using a focused research strategy will allow the Axis

to achieve some early technology advantages, and later allow the Allies to catch up and get ahead. If everyone tries to do everything (which they can't), you won't achieve the technology advantages you need to win. Players should experiment with various research strategies to determine what works well and what doesn't.

VII. GAME OPTIONS

The Artificial Intelligence in *Strategic Command* is competent and challenging, but like most computer AI's it has its limitations. To make the solitaire game more interesting, players can select higher difficulty and/or experience bonus settings. There are also different rules/variations and politics options that players can select to make each game unique.

The difficulty setting is used to affect internal percentages such as US and USSR interest into the war, number of Soviet troops that are transferred from Siberia, Free French creation percentages, Allied tracking of Axis surface raiders in the North Atlantic and Mediterranean during FOW, plundering amounts and initial Soviet income upon its entry into the war. Note that this setting does not influence combat formulas. Players should realize that the combined effect of all these changes at the Intermediate and Expert levels produces a different game than one played against a human opponent on default settings.

The experience bonus setting adjusts the experience value for all opponent units used in the combat formulas. This includes existing units on the map at the beginning of a campaign as well as all subsequently purchased units by the AI. The +1 and +2 experience bonuses certainly make the AI more challenging as far as combat losses go, but do not necessarily make the AI smarter or overcome its other limitations.

While *Strategic Command* captures the essence of the Second World War in Europe, it is not an entirely accurate simulation of the grand conflict or a particularly realistic wargame for some players. It is, however, a fun game to play and the various game options provide enough flexibility for most players to find some optimum combination of settings for play balance and personal satisfaction. Here are some suggestions for the various settings:

Fog of War - Playing with FOW on is the most interesting choice for experienced players. As previously discussed, this is a very interesting aspect of *Strategic Command*. However, turning it off provides inexperienced players a chance to learn how to play the game by watching an opponent's moves. Letting the AI play with FOW off can sometimes enhance its performance, so players may want to experiment with this. Selecting "Allow Rules And Politics To Be Made During Game" allows this and other options to be toggled on and off during a game.

Free French Units - Historically, the Free French were not significant at the scale of this game. This option is essentially a variant to provide the Free French a greater role, one that perhaps they could have played. However, this option can often lead to gamey strategies where players can evacuate sizeable French forces to automatically become Free French. If players think that this is too unrealistic, then the option can be turned off.

Soviet Partisans - Soviet Partisans can now variably affect the strength of captured Axis resources in the USSR and this simulates the disruption of Axis supply lines. Playing with this option on provides a realistic challenge for the Axis. It is also the closest thing to weather effects on the eastern front that *Strategic Command* has to offer since the chance of partisan activity increases to 75% during winter occupation months.

Yugoslavian Partisans - This option forces the Axis to maintain some additional garrison forces in the Balkans. This is a good option for fine-tuning play balance.

War in Siberia - This option should be off for the historical transfer of Siberian units to occur, which are usually required for play balance. Turning this option on provides a challenge for the Allied player.

Scorched Earth - Playing with this option on provides a realistic challenge for the Axis, simulating the lack of paved roads in Russia and the different gauge of railroads that had to be converted. It slows the Axis blitzkrieg invasion by limiting supply and preventing units from being built in or op moved forward to newly captured cities. Turning this option off provides a challenge for the Allied player.

USA Politics - Random entry is the most interesting choice for experienced players, since it forces both sides to carefully consider their strategy options and the effect their decisions have on USA war readiness. However, because the Japanese attack on Pearl Harbor was the most significant factor for the USA entering the war, historical entry is also an appropriate choice. When playing solitaire on the higher difficulty settings, random entry will either be delayed for the Allied player or advanced for the Axis player. While challenging, this often results in ahistorical entry dates. If players think that this is too unrealistic, then historical entry should be selected.

USSR Politics - There is some debate whether the USSR was prepared to declare war and attack Germany by 1941, considering the dismal state of its army following Stalin's purges of the officer corps and various reorganizations prior to *Barbarossa*. It is fairly clear that the Soviet Union was in fact not ready for war in June 1941 and unprepared to launch a preemptive war anytime soon thereafter. Since there is no historical option for USSR, selecting neutral may be the most historical result but provides Germany guaranteed security in its rear while being allowed to rampage in the west. Random entry is essentially a variant. It is the most interesting choice for experienced players, since it forces the Axis player to carefully consider his strategy options and the effect his decisions have on USSR war readiness. It is plausible that the Red Army could have been better prepared to launch a surprise attack against Germany if the German Wehrmacht was engaged in a prolonged battle in England after a *Sealion* attempt and Germany's eastern flank was left vulnerable.

Italy Politics - Random entry is the most interesting choice for experienced players. It permits Italy to enter the war when Germany is near victory over France, which may be earlier or later than the historical entry date of June 10, 1940. Additionally, Allied abandonment of land positions in the Mediterranean can trigger an early entry, forcing the Allied player to carefully consider his strategy options in the Med and the effect his decisions have on Italy's war readiness. Leaving Italy neutral provides a challenge for the Axis player against the AI.

Axis/Allied Minor Politics - Random entry is the most interesting choice for experienced players, primarily because it forces the Axis player to consider Spain following France's surrender. Attack Spain too soon and Germany's fascist minors won't activate. Launch a *Sealion* invasion against England that may activate Spain as an ally too soon and Germany's fascist minors may not activate. Also, an Axis attack on Greece now affects the chance that Yugoslavia has pro-Allied coup on or after March 26, 1941. However, players could choose to keep minors either historical or neutral, which both provide interesting challenges.

VIII. DESIGNER'S NOTES

The following are some excerpts from the Battlefront.com forum with Hubert Cater's comments on various aspects of the game, roughly organized in the order of relevant topics from the User Manual:

Generic Units: The units in SC were chosen to be generic with the weighted factor between nations a result of leadership ratings for HQ's. The majors will have HQ's while the minors will not, and some HQ's are better than others especially between nations like Germany and France.

While the added value of having units under an HQ seemed to work well with regard to combat formulas in creating some of the difference between nations, it is not to say that this area may or may not be revisited in future versions. (I also chose to use Experience as a variable for units to reflect for example early experiences in Poland for the German army to make a difference in the upcoming battle for France and so on).

The Headquarters combat morale bonus is derived from an HQ's experience, so whenever an HQ is reinforced it will lose some experience and thus this will translate into a lower combat morale bonus from the parent HQ.

Subs: I know I might be opening a can of worms here, but another one that comes up often is the implementation of subs, not a true recreation I agree but again without overcomplicating the question I asked myself was what was the best way to include this feature in the current game? Again the decision was made to generally accept an abstraction whereby Allied capital ships represent fleets lead by the named ship, and subs represented wolf packs. Then the abstraction expands into various strategies including economics and overall grand strategy:

- Does Germany commit to the building of subs or even a navy for that matter? If it does then resources for an attack on Russia should suffer, so a balanced approach may be necessary etc.

- Do the Allies commit their naval and air resources to fighting the sub threat? (As represented by their naval units and air units in the game.) If so, does this weaken their resources for homeland defense against a possible *Sealion* etc., or long term strategy for an eventual D-Day etc.?

This was also the reason for the current price of subs, if you lower the price then you will have more subs on the board, if you have more subs then you have to lower their combat ratings or increase the number of Allied naval units, if you have more subs then you have to lower the values of sunk shipping and subsequent lost MPP's for the Allies. I have also resisted the requests for higher dive percentages as well primarily since I am using the above abstraction. Why? Well, Germany lost a lot of subs (~70% casualties in the sub arm) and since each sub represents a the drop in overall number of units since any prior investment in IT reduced the number of units wolf-pack, it should remain costly and not easy to win the battle of the Atlantic (as Germany never did), unless you decide to commit the resources, i.e. purchasing more subs or investing in research to advance the sub design etc., but at the same time have the probability of suffering in other areas of the war machine if you choose to do so. In fairness though, there have been suggestions since the original release that I feel would make things a bit more realistic without overcomplicating things, but due to a variety of reasons will have to wait...

Comment: I believe Version 1.06 wanted to modify Industrial Technology because it was so powerful and everyone was investing in this tech (Level 5 could give 50% cost savings). An unintended change was also the reduction for the initial setups for USA and USSR.

This effect was considered but it appeared that the overall effect was positive as the percentage reductions were still all relative and especially on the eastern front it allowed for some more mobility since the USSR could not build up as many Corps as it used to early on. From testing it allowed the Axis to make some greater drives early on, but the difficulty in maintaining them was increased due to the drop in overall number of units since any prior investment in IT reduced the number of units they also were able to build from pre 1.06 versions. Plus with the catch up system, if Russia invested in IT they could close any gaps if necessary with the Axis and if not they still start with relative Level 2 IT.

Dutch Gambit: It was included if the Axis player decided to dilly daddle a bit too much and ignore the French, under the right conditions I wanted to have the Allied AI try and pull a reverse Schlieffen and give the Axis player a bit of a surprise which it seems to have done in a few cases.

Canada: When does Canada usually enter the war in random mode? They historically declared war on Sept. 4, but it looks like they start off neutral in the 1939 scenario.

Historically I believe it was on the 10th, so about 99% of the time whenever the Axis player finishes their first turn Canada will join.

Country Alliances – Major and Minor: I believe the way alliances works is that a potential ally can only lean one way. So, Italy, Finland, etc. will NOT be Allies at any point. The same goes for the USSR or US joining the Axis. Italy, USSR and the US are considered majors and will only join their historical respective alliances. On the other hand, countries like Finland, Yugoslavia etc., are minors and can be declared war upon by any side, so in this case Finland could join the Allies if Germany declares war on them, or Yugoslavia could join the Axis if the Allies declared war on them. But if the "Axis/Allied Minor - Random" option is selected and

these minor countries have not been declared war upon, or have not entered the war yet, then they will join their historical alliances if the right play conditions have been met and if they are left untouched by either side.

Question: How about Spain, Vichy and Turkey? I recall the game Clash of Steel had "political points" that you could spend on trying to sway neutral into your camp?

This was something I thought about including as well, but decided against it and modeled it instead on game play. One of the main reasons for this was to avoid cheating, which I know was done in other games by saving and replaying turns, and at least this way it is still included but depends on how successful or unsuccessfully you conduct your campaigns. So countries like Spain and Turkey have also been included (as well as the regular countries) as hypotheticals to join the Axis under the right conditions.

Entrenchments: Entrenchment values are terrain specific. Each type of terrain will allow for a maximum entrenchment value, which increases +1 point per turn every time you do not move the unit or engage in combat with that unit. Leave that hex and it drops to zero. Max entrenchment values are as follows:

City = 4

Capital = 6

Fortification = 8

Mountain = 4

Open areas, Mines, Forests = 2

Fortifications: Even though a unit in Gibraltar is at Level 5 supply and not surrounded you can only reinforce it to strength '5' - you should be able to go up to '8'. When you connect to a major capital (Paris or Berlin) the port advances to strength 8 or 10 but the fort stays at 5 - it should advance! The Russians have a fort at strength 10 until it loses its connection to Moscow, so strength 10 forts are not unheard of.

The maximum reinforcement for the unit is confirmed as you pointed out, but the fortification strength is normal. The fort at Sevastopol in the USSR is a special case that starts at 10 when it enters the war. But if it is ever cut off it will only rise again to a maximum of 5 regardless of supply situation, similar to the Maginot Line that has forts at maximum strength of 5.

Leningrad: I went with the idea that Leningrad was just a regular city that sort of became a 'Fortress' due to the war and the subsequent prepared defenses. So keeping this in mind, I found that the entrenchment system works well since as the Axis player it takes you a little while (usually) before you drive your forces up to Leningrad and it gives the defenders a chance to sit there and entrench their unit each turn. Now I know that this is in itself not much different from other cities, but the fact that Leningrad is surrounded by water on five of its six sides (Baltic, Lake Ladoga, and the Neva River) plus the fact that attacks across a river hex are reduced, it really worked out well and can make taking Leningrad a bit of a chore.

Question: Is it a game function or a bug, when the Swedish air force does not intercept Axis air strikes against Swedish units?

This will happen on the first turn of an invasion of any country, it is more or less used to simulate the attacker advantage during these surprise attacks. After the first turn all units will act normally, so if the Swedish air unit is still around with the proper strength $\geq$ five it will defend.

Turn Length: There were two problems I saw with normalized two-week turns, i.e. one turn per month per side, and added weather effects such as limited movement etc.

- 1) Time length for summer turns would seem too short and
- 2) Time length for winter turns would seem too long

Now keep in mind the design philosophy of SC where I wanted to balance realism with playability before you jump all over me for the following explanations.

1) With normalized two-week turns it would be very hard to recreate late spring/summer activity such as the invasion of the Low Countries and France, preparations for *Sealion* etc. along a quasi-historical timeline. As it stands now the Axis player starting on May 10, 1940 has turns as follows:

- Turn 1 - May 10
- Turn 2 - June 7
- Turn 3 - June 21
- Turn 4 - July 5
- Turn 5 - July 19
- Turn 6 - August 2

With the normalized two-week turn system it would be like this for the Axis player:

- Turn 1 - May 10
- Turn 2 - June 7
- Turn 3 - July 5
- Turn 4 - August 2
- Turn 5 - August 30
- Turn 6 - September 27

So from this example by Turn 6 you've almost lost two months of summer "action time."

2) The winter turns would run the risk of seeming very long and ineffectual for this type of game, especially with reduced movement etc. Consider these months during a PBEM game for example:

- Income Comparison -

Current System: 100 MPP per turn = $13 \times 100 = 1300$ MPP

Normalized two-week system: 100 MPP per turn = $12 \times 100 = 1200$ MPP

- Time Effect -

13 turns vs. 12 turns but with the desired longer summer months and shorter winter months

- Movement Effect -

With the current system's reduced time length of Fall/Winter/Spring, the net effect is having about the same kind of movement/action activity as if it were the case with longer winter turns and lower action points etc.

Again, I know that this is all a simplification and just a few examples of the pros and cons, and it's not to say that the normalized two-week system doesn't work, but I would like to think for a different type of SC game... perhaps possibly a more advanced version.

Generally with the 13-turn system what I tried to create was a simplification of a one to two month turn with impulses, with the net effect similar to what you would get from a normalized 2-week turn system. *[Note: a 13-turn system only accounts for 44 weeks. The game actually uses an embedded calendar to advance each game turn. Therefore, a year has either 14 or 15 player turns to account for all 52 weeks, depending on specific dates.]*

Partisans: It has also been brought up that the Partisan units should not be able to leave their home countries, and while this may or may not be accurate, the choice was made to not include this restriction. Why? Basically with the current implementation there would really be no fear of rear guarding or even the requirement to use Axis resources to deal with the partisan problems.

Invasions: I found that assaulting an enemy unit directly from a transport could lead to a lot of abuse, in other words just keep trying until success, it's definitely a tradeoff right now and does make areas like Malta that much tougher. Exploiting the current design more often than not doesn't really happen. Most countries do not have the luxury to build enough units to guard the entire coast line and actually when I think about it, guarding an entire coast line would probably make an amphibious assault next to impossible using either design choice, so I am OK to leave it as it is.

Suez Loop: The original setup for the Suez link was just a design decision, mostly to ensure balance and not too much favoritism to the Allies. *[Note: ONLY Allied transports, not fleets, can move around Cape Horn via the South Atlantic to the Suez, and ONLY in one direction.]*

Question: HOW ARE THEY REINFORCING? ... it makes no logical sense...

If you completely surround a unit in a city, i.e. occupy all adjacent land hexes with your own units, it will only be able to reinforce up to five. For HQ's, they act as supply wagons that can increase a unit's supply even when enveloped in a pocket. The idea here was to have this simulate trapped formations being supplied by airdrops etc., but only if they have an HQ to bump up supply levels.

As a slightly differing train of thought, I have viewed units being resupplied when surrounded as more of an act of unit reorganization than of one of reinforcement.

Actually this is not far off at all with the design framework I chose. It is, as you mention, precisely the TIME SCALE and STRATEGIC SCOPE that determined the reinforcement rules. Being allowed to overrun units located in cities etc. too quickly and the game would not play out properly at all in a strategic sense, most likely it would be over in a couple of years easy. If it

were tactical in scope than I would agree the reinforcement rules would need serious tweaking, but the scale would be very much different, so I think that this has to be kept in mind as well.

France: None of the Free French rules were changed in the v1.06 patch, so some of the French navy can still become Free French, but the primary change was with the capture of Paris. This was to avoid some of the gamey play where Allied players would move the bulk of their army out of France and fight on without surrender. Now surrender occurs immediately when Paris is captured and may limit the above approach. It's not perfect mind you but there are consequences for bulk removal of the French land forces, for one a quicker surrender gives the Axis more buildup time for *Barbarossa*, and if the French abandon their Med positions too early it may draw the Italians into the fray that much sooner. So there is still some flexibility and give in take for either approach depending on your overall strategy but with both approaches weighted more heavily now.

If the Allies take and lose Paris in the *Overlord* invasion the game treats it as the surrender of a major country.

This is the same for all countries, any time a capital is captured, regardless if it is the first or second time to fall into enemy hands it is treated as surrender.

All Free French units that are in France disband and the entire country turns gray (German).

True but only the ones on French soil. The Free French units that might still be in the UK will not surrender.

It seems that the resources in France will develop beyond strength five even if you do not hold Paris - bug? It seems you can link up with a neutral Vichy France and use its capital?

This depends on which side you are referring to and which resources. If it is Axis occupied France they will increase up to max of eight, if it is Allies liberating France it could return to max ten without holding Paris only if there is a direct link to another major capital, which would have to be Moscow. This could happen in two ways. Direct from Moscow to France through Poland, Germany etc. if such an Allied line of hexes exists. Or actually through North Africa, if you can draw a line from Moscow to Iraq, all the way to Spanish Morocco, across the Gibraltar straight, through Spain and up to France. The Gibraltar straight is considered a link of land hexes.

The resources in France (and anywhere you can link to) will advance to ten if you hold a continuous line from the EDGE of Paris to the resource. The Allies do NOT need to control Paris to use it as supply base for their resources. If you do not control the hexes around Paris your resources will stay at five, otherwise they will advance to ten.

Interesting analysis as I've never noticed this before but nonetheless correct. This was not ever intended, but consider it a secret play feature available to all sides under the same conditions.

Siberian Reinforcements Arrival: Moscow, the Urals, Stalingrad and other cities are key to triggering the transfer, but it also depends on relative strengths, troop positions and so on. Basically it is triggered when the in game assessment mechanisms decide that the USSR is threatened and the transfer must be made. I do call this option "War in Siberia" but it could just

as easily be looked upon as "Allow the transfer of Siberian Troops" as well since I don't think it would have been too far off to assume this transfer would have happened regardless of the situation with Japan.

Question: If you look at the 1941 *Barbarossa* scenario, USSR starts with 1200 MPP's. The 720 MPP's USSR would normally get with a DOW in June 1941 and 480 for one turn's production. If you play the 1939 *Fall Weiss* scenario and make a DOW in June 1941, USSR will only have about 720 MPP's - is this a bug or done on purpose?

OK, what's happening here is Russia was always given a small amount of per turn income (going back to v1.0 of SC). I think it's roughly 10% of it's total per turn income until it entered the war when its industry would then fully gear up etc. to 480 MPP. This is how it ends up with 720 MPP's if you declare war on it June 22, 1941 with the 1939 *Fall Weiss* campaign. If you declare war before then it will be less and after that date it will be more and so on. This was as you guessed to represent its active war economy and to balance things out gamewise. The addition of the bonus MPP's to Italy and USA (added in later versions of SC) was to provide a check for early declarations of war against the US by the Axis or by early declarations of war by the Allies against Italy (there was a bug as a part of this addition that overwrote any start amounts set in the editor for the US and Italy until the v1.07 fix).

The problem with the *Barbarossa* campaign is that I set the initial start MPP's for Russia to be 720 MPP's to match the exact amount they should have on June 22, 1941 if you began with the 1939 *Fall Weiss* campaign but forgot that at the beginning of each campaign each country does a one time collection so this is how Russia starts with 1200 instead of 720. So if you feel that Russia starts with too much then all you have to do is edit the start amount to 240 and when the *Barbarossa* campaign starts USSR will have the correct 720 MPP's (240 + 480 one time collection at start of campaign).

Difficulty Settings: Every time anyone defeats a country you will get a victory/plundering bonus, so at the higher difficulty settings you the (human player) will get a little less for conquering a country, and the AI player will get a little more when it conquers a country. In general victory/plundering bonuses are as follows:

- Conquering a minor country: random value [250-350 MPP's]
- Conquering a major country: random value [750-1000 MPP's]

So for each increasing difficulty level selected, you will collect -50 for each minor conquered and -100 for each major, while the AI would collect +50 and +100 respectively. It works the other way around if you select a decreased difficulty setting.

There are a few other adjustments on difficulty levels with respect to the percentage of naval units that become 'Free French', number of units that are transferred when 'War in Siberia' is not selected etc., but for the most part it seemed like this minor adjustment in victory/plundering MPP's helps to make the game a little more challenging for the human player while giving the AI (mostly Axis in this case since it is usually the one conquering countries) a little bit extra here and there to give it a fighting chance, but it still has to do it's job in taking out countries of course.

In general the AI will play mostly the same for all difficulty setting since there are no adjustments for combat formulas or MPP cheating in the traditional sense, but it will undertake additional planning if things go well, (like the AI may invade Vichy France or Spain etc.) and this usually happens when the AI is set with more experienced units or other adjustments have been made to either the difficulty settings or things like no 'Partisans' etc.

Artificial Intelligence. Generally I tried to use Fuzzy Logic and broke it down into a few levels along the lines of what the AI has to do at the basic combat level, an immediate objective level where it has to think about defending or seeking out resources/cities etc., and then the strategic level, who do I declare war on etc. Thing is AI programming takes a long time, I remember reading it usually takes about 50% of the whole time for a project and it was pretty close to that for me. Testing takes a lot of time and I did fool around with it quite a bit, but decided against including things it did very poorly and chose a smaller subset that it did decently well. It might not sound right but it is definitely better from an end point of view.

Hope that helps in regards to what I was thinking. 😊 Hubert

IX. TECHNOLOGY EFFECTS CHART

Research Type		Level	0	1	2	3	4	5
Anti-Tank Weapons								
Corps, Army	TD		1/2	2/3	3/4	4/5	5/6	6/7
Maximum Strength			10	11	12	13	14	15
Heavy Tanks								
Tank Group	TA, TD		5/5	6/6	7/7	8/8	9/9	10/10
Maximum Strength			10	11	12	13	14	15
Anti-Aircraft Radar								
Mine, Oil	AD		0	1	2	3	4	5
Port	AD		1	2	3	4	5	6
City, Fort, Capital	AD		2	3	4	5	6	7
Long-Range Aircraft								
Air Fleet	SR, S		6/5	7/6	8/7	9/8	10/9	11/10
Strategic Bomber	SR, S		8/6	9/7	10/8	11/9	12/10	13/11
Carrier	SR, S		3/3	4/4	5/5	6/6	7/7	8/8
Carrier Maximum Strength			10	11	12	13	14	15
Jet Aircraft								
Air Fleet	AA, AD		3/3	4/4	5/5	6/6	7/7	8/8
Strategic Bomber	AD		1	2	3	4	5	6
Carrier	AA, AD		1/3	2/4	3/5	4/6	5/7	6/8
Air Fleet Maximum Strength			10	11	12	13	14	15
Heavy Bomber								
Strategic Bomber	RA		3	4	5	6	7	8
Maximum Strength			10	11	12	13	14	15
Sonar								
Battleship	ND		3	4	5	6	7	8
Cruiser	ND		2	3	4	5	6	7
Carrier	ND		5	6	7	8	9	10
Advanced Subs								
Sub	NA		5	6	7	8	9	10
Evasion Dive			25%	30%	35%	40%	45%	50%
Maximum Strength			10	11	12	13	14	15
Gun Laying Radar								
Battleship	NA, ND		4/3	5/4	6/5	7/6	8/7	9/8
Cruiser	NA, ND		2/3	4/3	5/4	6/5	7/6	8/7
Maximum Strength			10	11	12	13	14	15
Rockets								
Rocket Detachment	TA, SA, NA, SR		1	2	3	4	5	6
Maximum Strength			10	11	12	13	14	15
Industrial Technology								
Production Costs			100%	95%	90%	85%	80%	75%

X. CREDITS

GAME DESIGN AND PROGRAMMING

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USER MANUAL

Hubert Cater

STRATEGY GUIDE

Bill Macon, Dan Fenton

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